better together!

team building club

THE EDGERTON EXPLORIT CENTER
www.edgerton.org

Why is Teamwork Important to Scientists?

Why is Teamwork Important to Scientists?

Teamwork is essential to scientists because it allows them to combine different skills, knowledge, and ideas to solve complex problems. Here's why teamwork is important in science:

1. Diverse Perspectives: Different scientists have different areas of expertise. When they work together, they bring various viewpoints that can lead to more creative and effective solutions.
2. Complex Problem Solving: Many scientific challenges are too big or complicated for one person to tackle alone. By working as a team, scientists can break down these problems and address different parts more efficiently.
3. Shared Workload: Scientific research often involves a lot of work, from designing experiments to analyzing data. By dividing tasks among team members, the workload is shared, making the process faster and more manageable.
4. Learning from Each Other: Teamwork allows scientists to learn from one another's experiences and skills, which can improve their own abilities and understanding.
5. Innovation: When scientists collaborate, they can combine their ideas to create new approaches and innovations that might not have been possible individually.

In summary, teamwork enables scientists to achieve more than they could on their own by leveraging the strengths and knowledge of the group.

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INTRODUCING EVERYONE

getting to know our class

HANDS UP FOR SCIENCE

An activity designed to get to know one another

Levels: K through 5th
Time: 20 to 25 minutes

OBJECTIVES

To help us learn more about the friends around you, we are creating a mural together that says,
“Hands Up for Science!” “Reach for the STARS!”
Each Student will be creating a one-of-a-kind hand that is designed by you and shows a little bit about who you are!

PREPARATION

It’s best to do this activity at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

ACTIVITY

1. Outline the hand and part of the arm with a pencil first (outline non-dominant hand) and then trace over the pencil with a Sharpie marker. Demonstrate how to do this.

2. Cut out the hand outline.

3. Use markers to decorate a one-of-a-kind hand.

4. The child needs to include their first name on the front of their hand.

5. Kids may design the hand how they want, include things about themselves, or simply decorate it.

6. When completed, kids may glue their hands to the mural. Add on stars.

7. Display in a prominent place in your classroom.

MATERIALS:

EACH STUDENT NEEDS:

- Mural Paper/Roll Paper with the words “Hands Up For Science” “Reach for the Stars” on it.
- Paper for kids to trace their hands and forearms on Or print use a preprinted handprint template (included below).
- Washable Markers
- Scissors
- Painter’s Tape to affix mural to the wall
- Glue sticks or Rubber Cement to attach hands to mural
- Star cut outs - write areas of science study on each star

REFLECTION

Things to do after the activity

Display mural in a prominent place for kids to enjoy.

Show a finished hand outline that you have designed and cut out. Talk about what things you like that you included on your hand, favorite colors you used, etc. Then brainstorm things the students could include on the hand outline....circles, stars, hearts, swirls, diamonds. Favorite sport, activity, food, season, etc.

WOULD YOU RATHER

A team-building activity designed to get to know each other

Levels: K through 5th
Time: 5 to 10 minutes

OBJECTIVES

Start a dialogue with the reminder that we are all different and that is what makes life and friends so fun and interesting! Today we are going to discover some fun things about our class—
We will discover we all have different interests and talents.
We will discover that we may like different things — and that is GREAT! It would be a boring world if everyone was the same and thought the same and liked the same things!!

MATERIALS:

EACH STUDENT NEEDS:

- Nothing! You don't need anything in order to play!

PREPARATION

Watch this video on why scientists need to be a good teammate:
The Power of Teamwork

Before you play, create a list of fun (and appropriate) would you rather questions. The more you come up with, the more you'll get to know your group!

REFLECTION:

1. How does getting to know your group/team/class make you a better scientist?
2. Share something you learned about another group member!

ACTIVITY

Have kids stand in a single file line facing the "question asker" who is standing at the front of the room.
When each question is asked, kids will step either right or left out of line to indicate their preference. Have them look around to see their peer's responses. All volunteers and helpers can be in the line as well indicating their preferences! preference for each question---have kids either step right or left out of the line. All volunteers and helpers need to be in the line too showing their preferences.

WOULD YOU RATHER QUESTIONS

- Would you rather ride an elephant or a camel?
- Would you rather be able to fly or breathe underwater?
- Would you rather swim with dolphins or swim with turtles?
- Would you rather be an amazing dancer or an amazing singer?
- Would you rather eat at McDonald's or eat at SpongeBob's restaurant?
- Would you rather be invisible or be able to fly?
- Would you rather own a horse or a bear?
- Would you rather be able to drive a car or fly a plane?

STRING WEB ACTIVITY

A get-to-know-you activity designed to show how we are all connected!

Levels: K through 5th
Time: 10 to 15 minutes

OBJECTIVES

This activity helps students think about their existing networks and the connections that are all around them. Was there ever a point in the activity when it seemed like someone wouldn't find something in common? Probably not! You can always find ways to connect with others, even over trivial things.

MATERIALS:

YOU WILL NEED

- Ball of Yarn

PREPARATION

Watch this video on how this activity is played:
String Web Activity

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

ACTIVITY

1. Gather the students in an open space in your room andhave them sit in a circle.
2. Start with the ball of yarn in your hands and 1. Say your name and 2. Share something about yourself.
3. Hold the end of the yarn in one hand and with the other hand toss the ball of yarn to a student.
4. That student catches the ball of yarn and answers the same two questions before holding on to the yarn and tossing it to another friend.
5. Continue on until everyone has had a turn.
6. If time allows, go through another round asking "favorite sport," "favorite snack," favorite animal," etc.

REFLECTION

Questions to ask after the activity

Was there ever a point in the activity when it seemed like someone wouldn't find something in common?

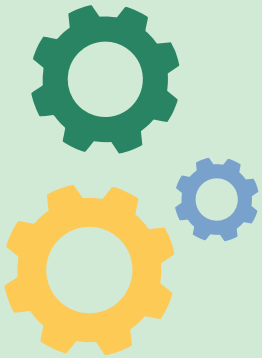
How many times were you holding onto the string? The more strings you're holding, the more times you spoke up and made an effort to make a connection, and the more connections you've made, the stronger your network.

What happens if you let go of one of your strings? An important part of building a network is maintaining it.

Look around at the web you've created. You're all connected to each other, maybe in ways you did not expect. Even if your string isn't directly connected to someone, you're connected to someone else who is connected to that person; that's how networks function - you use your network to make the connections that you can't make directly on your own.

LISTENING SKILLS

& Team Building Skills



Listening

Active Listening

Active listening is a conscious effort to fully understand what someone else is saying and communicating. It involves paying close attention to the speaker, analyzing what you hear, and responding in a way that shows you're engaged: by Paying attention, Analyzing, and Responding

Why Listening Skills are Important for Team Building:

Fosters Understanding: Good listening helps team members understand each other's perspectives, needs, and concerns. This leads to better cooperation and fewer misunderstandings.

Builds Trust: When team members feel heard and understood, it builds trust within the team. They are more likely to share ideas and concerns, which is crucial for collaboration.

Encourages Open Communication: Active listening creates a safe environment where everyone feels comfortable expressing their thoughts and opinions, leading to more open and honest communication.

Enhances Problem-Solving: By listening carefully to different viewpoints, teams can come up with more effective solutions to problems. It allows the team to consider all options and make well-informed decisions.

Improves Relationships: Good listening strengthens relationships between team members. When people feel respected and valued, it creates a positive team dynamic and enhances overall teamwork.

Reduces Conflict: Effective listening can prevent and resolve conflicts by ensuring that all parties feel heard and understood, making it easier to find common ground.

CAPTAIN'S ORDERS

An active game designed to explore listening skills & following directions

Levels: K through 5th
Time: 15 to 20 minutes

OBJECTIVES

Captain's Coming is a great team-building activity and game to help people practice listening carefully to instructions. For everyone, this activity involves cooperation, movement, and usually laughing and lots of fun! For some people, this game will involve learning new vocabulary too.

PREPARATION

Watch these videos on the active listening:
Why is Listening Important?

Watch this video on how to play:
How to Play Captains Orders
Note: The commands may be different in the video- that's okay! Everyone plays games differently, just use what ever commands you'd like!

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

MATERIALS:

EACH STUDENT NEEDS:

- just a large open space for the students to play! inside or outside will work!

MAKE SURE THE KIDS ARE EXTRA CAREFUL IF YOU'RE PLAYING ON CONCRETE OR HARD FLOORS!

ACTIVITY

1. Select one player to be the captain. The captain stands at the front of the designated play space. Alternatively, with younger children, an adult should play the role of captain.
2. All other players stand in a line, facing the captain.
3. Introduce the various commands and actions to be used in the game.
4. Practice each command with the group several times – Make the practicing fun!
5. When ready for play to begin, the captain calls out a command. The players do the action associated with the command.
6. Play continues with the captain calling and the 'crew' responding. The faster the actions are called and performed, the trickier (and funnier) the game becomes.

VOCABULARY

while this is an active game, there are still certain skills we are learning. here's some vocab:

Listening: giving attention to a sound. When listening, a person hears what others are saying and tries to understand what it means.

Active Listening: a conscious effort to fully engage with someone while they are talking to you, with the goal of understanding them instead of just waiting to respond

BASIC COMMANDS

Introduce a few commands at a time and mix them up...add in extras to keep the challenge going

To the island: run to the left boundary (can also be a command of 'port')

Scrub the deck: crouch down and make a scrubbing motion with hands

Hit the deck: lay on your stomach

Clear the deck: everyone must have their feet off the floor

Up periscope!: lie on back with one leg raised straight in the air. Twist the raised foot as if a scanning periscope

Captain's coming: stand to attention and salute

Climb the rigging: pretend to climb a rope

PARTNER COMMANDS:

Abandon ship!: players must pair up, sit face to face, and pretend to row a lifeboat

Dance party: players pair up and dance together

Crow's nest: players pair up and the lightest player rides on their partner's back (piggyback)

TIPS & HINTS

for playing Captain's Orders

- Keep the game fun and flexible!
- Keeps the kids moving, especially for young children
- Introduce new commands slowly- there are a lot of orders, and starting the kids off with just a few commands and slowly introducing the rest will help everyone understand the game more!
- you can also print off sheets with the commands if kids (or yourself) are struggling to remember commands
- if you have extra helpers, have them play with the students! That way the students have someone to look to if they can't remember a command

QUESTIONS TO ASK

test what the students learned from the activity

1. How did you practice your listening skills through this game?

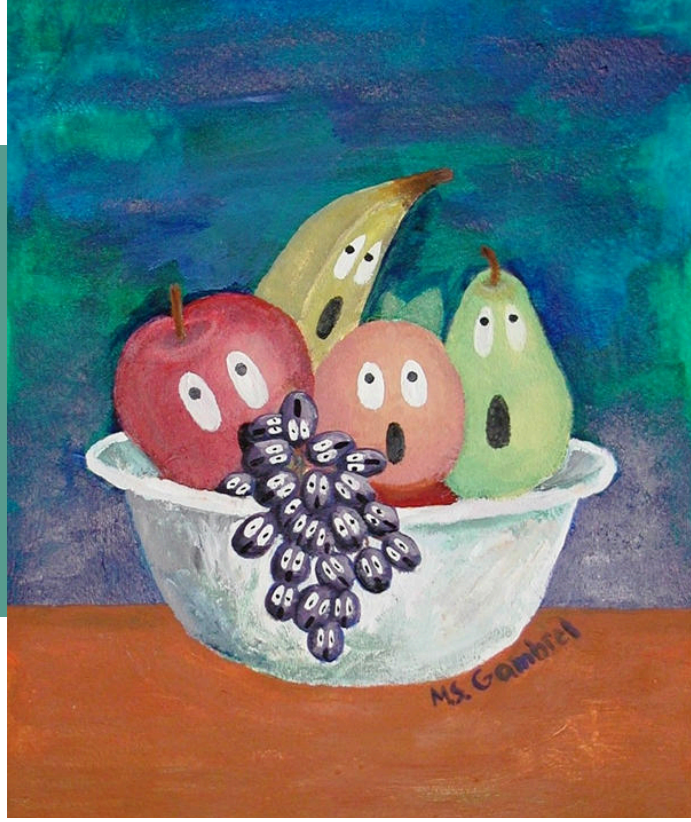
2. What part of listening were you good at? What part do you need to work on more?

3. What command was your favorite? What command would you add if you were captain?

FRUIT BASKET UPSET

A new twist on the old classic “Musical Chairs”

Levels: K through 5th
Time: 15 to 20 minutes



OBJECTIVES

Avoid being the last person to find a spot when your fruit is called out. If you do, you will become the "caller" for the next round.

PREPARATION

Watch this video on how to play this game:
Fruit Basket Upset

In order to keep everyone safe:
1. Remind the children to watch where they are running to avoid collisions.
2. Remind kids to stand on the mats, not dive on or sit on as they are finding a space so avoid injuries.

MATERIALS:

YOU WILL NEED:

- Mats or Hula Hoops, set in a large circle on the grass, spaced out for kids to stand on/in
  - One less mat/hoop than the number of kids

HOW TO PLAY

1. This game is similar to musical chairs. To start, everyone stands in a circle with one person in the middle. Each person gets to choose to be one of 4 fruits (the 4 fruits are collectively chosen by the group).

2. The person in the middle calls out one of these 4 fruits.

3. The people who belong to that fruit family have to move to a different spot in the circle that has just opened up (including the person in the middle who called out the fruit).

4. The last person to find a spot becomes the caller and calls a new fruit next round.

HINTS

In order to keep the game fun

1. Instead of using fruits as indicators, the group can choose any 3 indicators such as football teams, types of pizza, colors etc.

GOOD SPORTSMANSHIP

& Team Building Skills

Good Sportsmanship

Good Sportsmanship

Good sportsmanship refers to the practice of showing respect, fairness, and graciousness in both winning and losing situations, whether in sports or other competitive activities. It involves treating teammates, opponents, officials, and spectators with kindness and integrity, regardless of the outcome.

Why is Good Sportsmanship Important for Team Building:

Promotes Respect: Good sportsmanship encourages team members to respect each other, their opponents, and the rules of the game. This respect helps build a positive and supportive team environment.

Fosters Team Unity: When team members demonstrate good sportsmanship, they support each other, celebrate successes together, and handle losses as a group. This shared experience strengthens the bond between teammates.

Encourages Positive Attitudes: Good sportsmanship helps maintain a positive attitude, even in challenging situations. This positivity can be contagious, motivating the entire team to stay focused and work together.

Builds Character: Practicing good sportsmanship teaches important life skills, such as humility, patience, and empathy. These qualities contribute to stronger, more cohesive teams that can work well together both on and off the field.

Reduces Conflict: By emphasizing fairness and respect, good sportsmanship helps prevent conflicts and disagreements within the team. It encourages constructive communication and problem-solving.

Sets a Good Example: When team members practice good sportsmanship, they set a positive example for others, both within their team and in the wider community. This can enhance the team's reputation and inspire others to do the same.

DRESS UP RELAY

A team-building activity that encouraged good sportsmanship

Levels: K through 5th
Time: 15 to 20 minutes
Location: Indoors or Outdoors

OBJECTIVES

Looking for fun classroom party ideas? A dress-up relay race is great for any age and it's infinitely adaptable. We've used it for back-to-school parties, Valentine's Day and end-of-school shindigs, kindergarten through fifth grade, and it's always popular!

PREPARATION

Watch these videos on the explanation of good sportsmanship:
Always be a Good Sport

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

MATERIALS:

EACH TEAM NEEDS:

- any type of dress up clothes or costumes

AS YOU PLAY:

Celebrate "positives" you see in sportsmanship and encouragement from the students and teams!

ACTIVITY

1. Place two sets of dress-up items in a box or suitcase at the end of the race area.
Divide the group into two teams.

2. On your signal, the first player runs down to their dress-up box, puts on all of the dress-up items, and then runs back to their team.

3. When they arrive, they take off the clothing items and give them to the next player. This player puts them on and races the playing area length.

4. When they return, they pass the items onto the next player.

5. Play continues until all team members have raced in the dress up clothes one time.

REFLECTION:

Questions to ask after the activity:

1. What did you learn during this game?

2. How did you practice good sportsmanship/being a good teammate during this activity?

BALLOON TENNIS

An activity designed to create and explore team building skills.

Levels: K through 5th
Time: 30+ minutes

OBJECTIVES

Balloon Tennis is an engaging and dynamic activity designed to provide children with a playful yet developmental experience. This activity involves using makeshift rackets, which can be anything from fly swatters to paper plates attached to sticks, to keep a balloon in the air by hitting it back and forth. It's a versatile game that can be played indoors or outdoors, making it accessible and convenient for most settings. The importance of "Balloon Tennis" in child development cannot be overstated. It offers a fun way to enhance physical coordination, encourage active play, and develop social skills when played in pairs or teams. Plus, it introduces children to basic concepts of sportsmanship and competition in a non-threatening environment.

MATERIALS:

EACH STUDENT NEEDS:

- 6 inch paper plates
- jumbo craft sticks
- balloons
- markers
- Cool temp glue gun

PREPARATION

Watch this video about this activity: Balloon Tennis

It's best to do this activity at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

CREATING THE BALLOON TENNIS RACKET:

1. Use the markers to decorate the inside portion of a paper plate in any desired design – Kids can put their name or initials on their racket, make it the colors of their favorite sport's team, etc.
2. Once rackets are decorated, kids will use the cool temp glue gun to attach the craft stick as a handle onto the back of their plate. Have them use plenty of glue.

Note: Some kids may prefer to work longer on decorating their racket and that's fine! Start the balloon games after about 10 minutes while others finish their racket.

VOCABULARY

Words to know for this activity

Teamwork: when a group of people work together to achieve a common goal

Communication: the process of sending and receiving information through verbal and non-verbal methods

Good Sportsmanship: how a person treats their opponents and others during games and competitions. It can include being polite, following the rules, and showing respect

PRACTICE WITH THE RACKET:

Partner kids up. An uneven number of kids? A helper can be their partner. Give one inflated balloon to each group of two.

1. Kids individually use their racket to bop the balloon up in the air. Kids practice controlling the balloon with their racket. Partner can count the # of bops/minutes. Then switch to another partner.
2. Kids pass the balloon back and forth with their partner and see how long they can keep the balloon in the air.

HOW TO PLAY:

1. Give each group of 2 kids a team number(Ex. - 1,2,3,4,5, or 6 depending on how many groups you have).
2. Kids take turns serving the "ball" (balloon) to their partner. The kids volley the balloon back and forth. The other person gets a point if a child allows the balloon to hit the ground. (Teachers – demonstrate how to play a round or two and demonstrate good sportsmanship).
3. Teams keep score. The winner is the first person on the team that gets five points. Have kids switch teams so they can compete with another friend. (Losers stay in their spot, Winners move to another team and match up with another partner. (ex. - group #6 winner moves to team #5, group 5 winner moves to team #4, etc.)
4. Be enthusiastic and encouraging to all. If you see kids struggling, step in and help before they want to give up.

QUESTIONS TO ASK:

1. How does this activity help with your teamwork?
2. How did you use teamwork throughout this activity?
3. What other skills did you use?
4. What did you learn about your partner during this activity?
5. How well did you and your partner work together? What made it so that you worked so well together?

THINGS TO TRY WITH YOUNGER KIDS:

1 Younger kids may simply enjoy some individual activities that do not require a partner or keeping score.

2. They may try using their non-dominant hand to hit the balloon up in the air over and over.

3. They can try bopping the balloon with their racket while standing on one foot and hopping to where the balloon floats to.

HELP ALL KIDS FEEL SUCCESSFUL IN THEIR OWN LEVEL

4. Young kids may simply enjoy watching the others play balloon tennis and that is fine.

HORSE, GALLOP, AND HAY

Levels: K through 5th
Time: 10 to 15 minutes

OBJECTIVES

Objective: The objective of this game is for teams to race against each other by galloping on their "horse" to retrieve "hay" and return it to their team. Each team member takes turns, and the first team to have all members complete their relay wins. By playing this game, children can develop teamwork and cooperation as they work together to complete the relay. They also practice physical coordination and balance while "galloping" on their noodle horse, and they experience the fun and excitement of friendly competition. Additionally, taking turns and following rules helps reinforce listening skills and fair play.

MATERIALS:

EACH STUDENT NEEDS:

- One Pool Noodle Per Team
- T-Shirts/ Towels

PREPARATION

Watch this video on how this activity played:
Horse, Gallop, and Hay

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

AS YOU PLAY:

Celebrate "positives" you see in sportsmanship and encouragement from the students and teams!

ACTIVITY

Divide kids into two teams
1. Each team will need one pool noodle to be their "horse."
2. Hay (T-shirts or towels) will be placed at the finish line.
3. Kids ride their noodle like a pony and gallop from the starting line to the finish line, pick up the hay (1 T- shirt/towel) and gallop back to the corral (finish line).
4. They will give their "horse" to the next teammate in line and the relay continues.
5. When a child has finished his turn, he/she sits down.
6. If teams are uneven, one team member goes a second time.
Play 2-3 rounds

HULU HOOP TIC-TAC-TOE

A S.T.E.A.M. activity designed to explore the topics of the center of gravity

Levels: K through 5th
Time: 10 to 15 minutes

OBJECTIVES

The objective of this game is for teams to compete in a fast-paced version of tic-tac-toe by racing to place their items in hoops to get three in a row. Teams must also strategize to block their opponents from achieving three in a row first. Playing this game helps children develop strategic thinking as they decide where to place their items and how to block their opponents. The game also encourages teamwork and communication, as players must coordinate with their teammates to win. Additionally, the physical aspect of the game promotes active play, coordination, and the excitement of friendly competition.

PREPARATION

Watch this video on how this activity is played:
Hula Hoop Tic-Tac-Toe

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

MATERIALS:

EACH STUDENT NEEDS:

- 9 hula hoops,
- 8 Beanbags/blocks/cones - 4 of each color
- Open space
- Divide kids into two teams and give each team a set of bean bags.

ACTIVITY

1. Set up hoops in a 3 by 3 square.

2. Divide kids into two teams in lines and give each team their beanbags. These items can be blocks vs balls, red items vs blue items, etc. The aim of this activity is to get three in a row, but to also stop your competing team from getting three in a row too!

3. On 'go', teams will race one at a time and place an item in a hoop trying to get 3 in a row (TIC TAC TOE). If TIC TAC TOE is unsuccessful within those 4 turns, the next players running will remove ONE of their items to an empty hoop until TIC TAC TOE is successful.

4. The team that wins the most rounds of tic-tac-toe may receive a special privilege, a bonus point, or a small incentive. The game gets kind of physical at times. This game produces great fun and competition. A variation allows the team that "plays" second to get two moves. What is interesting is that the team that gets this "advantage" rarely wins.

REFLECTION

1. What did you learn during this game?

2. How did you practice good sportsmanship/being a good teammate during this activity?

LOGGERS RELAY

Levels: K through 5th
Time: 10 to 15 minutes

OBJECTIVES

The objective of this game is for teams to work together to move from the starting line to the finish line by having one teammate jump over a noodle while the other two teammates swing it. Each team member takes turns being the "jumper" and the "log swingers" until everyone has had a chance to play both roles. This game helps children develop coordination and timing as they jump over the noodle in sync with their teammates' movements. It also fosters teamwork and communication, as players must work closely together to keep the noodle swinging smoothly. Additionally, the game promotes physical activity and encourages kids to take turns and support one another in a fun, cooperative setting.

PREPARATION

It's best to do this activity at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

ACTIVITY

1. Two teammates grab the ends of a noodle (like the ends of a jump rope) and lay it in front of the third teammate who is standing between them.
2. The middle"jumper" jumps over the noodle and the other two "swingers" swing the noodle behind and over the head of the jumper and then back in front so the jumper can jump over it again.
3. The teams go all the way from the starting line to the finish line and then run back to the starting line.
4. Repeat three times until all team members have been the "jumper" and the "log swingers."

MATERIALS:

EACH STUDENT NEEDS:

- one pool noodle per team

AS YOU PLAY

Encourage the players to use proper communication and teamwork skills and use this game as an opportunity to practice patience.

REFLECTION

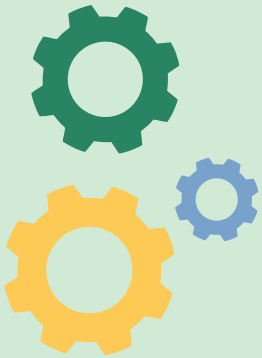
1. How did working as a team help you complete the challenge, and what was the most difficult part about coordinating with your teammates?

2. What strategies did you use to keep the noodle swinging smoothly and time your jumps correctly?

3. If you were to play this game again, what would you do differently to improve your team's performance or make the game more fun?

PATIENCE

& Team Building Skills



Patience

Patience

Patience is the ability to stay calm and composed in challenging or frustrating situations without becoming angry or upset. It involves waiting for the right moment, allowing others the time they need, and understanding that not everything happens instantly.

Why is Patience Important for Team Building:

Encourages Understanding: Patience allows team members to take the time to understand each other's perspectives, strengths, and weaknesses. This understanding is key to effective collaboration and cooperation.

Reduces Stress: When team members are patient, it reduces stress and tension within the group. A calm and composed approach helps everyone work more efficiently and harmoniously, even under pressure.

Improves Communication: Patience is essential for effective communication. It ensures that everyone has the opportunity to speak and be heard without being rushed or interrupted, leading to clearer and more meaningful discussions.

Fosters Learning and Growth: In a team setting, not everyone learns or works at the same pace. Patience allows team members to support each other's development, providing the time and space needed for growth and improvement.

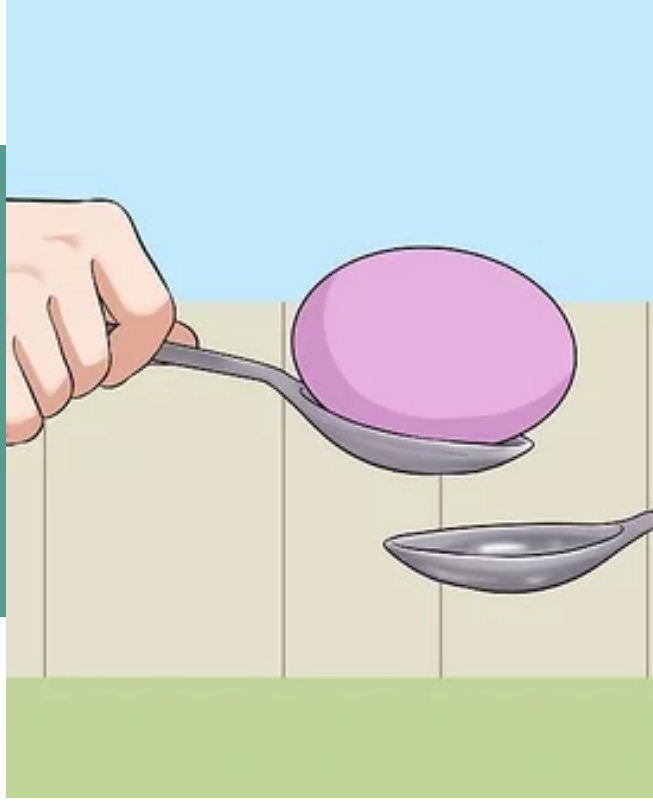
Enhances Problem-Solving: Patience is crucial when working through complex problems. It encourages team members to think critically, consider all options, and work through challenges methodically without rushing to a solution.

Builds Trust and Cooperation: Patience demonstrates respect for others' processes and timelines, which builds trust within the team. When team members feel that they are not being rushed or pressured, they are more likely to cooperate and contribute effectively.

EGG & SPOON RACE

An activity to practice patience & teamwork skills

Levels: K through 5th
Time: 10 to 15 Minutes



OBJECTIVES

An egg race is when you walk from one point to another while balancing an egg on a spoon without dropping it—whoever gets to the finish line first wins! While the classic egg race is fun and challenging, there are lots of ways you can make the game even more entertaining. Try turning the egg race into a relay, carrying the spoon in your mouth, or using different types of eggs for an egg race you'll never forget!

PREPARATION

Watch these videos on practicing patience:
Patience

It's best to do this activity at least once before teaching the students to ensure you know how the activity works.

ACTIVITY

1. Divide the players into two teams.

2. Give each player a spoon and each team an egg.

3. Line the teams up at the starting line.

4. Each player needs to carry the egg on the spoon to the turn-around point and back again.

5. When they return to the start, they carefully pass the egg to the next player. All of the players must complete the race to win.

AS YOU PLAY

Celebrate "positives" you see in sportsmanship and encouragement from the students and teams!

MATERIALS:

EACH STUDENT NEEDS:

- Spoons (one per player)
- Egg (one per team) (hard boiled, plastic, or even a ping pong ball can be fun)

OTHER OPTIONS

1. Use real hard-boiled eggs! If you are daring and don't mind a mess, try this relay race with a real egg that you hard-boiled in advance. It's quite a challenge. (Note: It is NOT recommended to use real eggs inside. If you decide to use real eggs, be sure that the kids are walking on a softer surface and have clothes that they don't mind getting messy. Even hard-boiled eggs break and sometimes can be slimy. If you choose to use them, make sure that the kids know in advance. You'd hate for them to be surprised.)

2. Another idea is to fill the plastic egg with some small toys/treats. If the egg falls and breaks open, the player must put the treats back in the egg before continuing on.

3. You can also make the race more challenging by setting up obstacles along the way. Or have the players skip instead of walk.

HANDS & FEET HOPSCOTCH

Levels: K through 5th
Time: 10 to 15 minutes

OBJECTIVES

This activity is inspired by the sculpture Bighands by Nic Nicosia. The steel sculpture is eight feet tall and has oversized hands and feet.
Our hands and feet are very powerful. We need our hands and feet to do everyday things. We use them to build things, to move around our environment and the world, and to interact with other people. Sometimes our hands and feet may feel too big and we can feel clumsy, but it is our differences that make us special. As we practice controlling our bodies, we can learn to embrace and appreciate all that they do for us.

PREPARATION

Watch this video on how to play:
Hands and Feet Hopscotch

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like. For this activity, you'll want to print out the hands and feet and tape them to the floor. Test out the course a few times if you wish to!

MATERIALS:

YOU WILL NEED:

- Photo copied hand/foot images on cardstock
- Painter's tape
- Timer

Copy hand and footprints and use painter's tape to arrange the prints in 3 columns and 13 rows

ACTIVITY

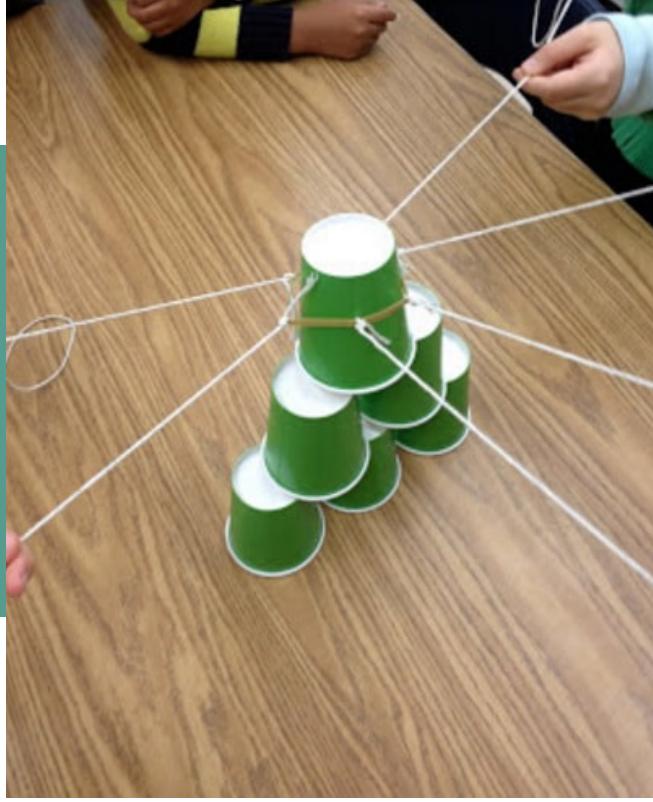
1. Each child will jump and follow the image pattern (feet landing on the photos of the feet and right/left hands landing on the photos of the correct hand). It's trickier than it sounds!
2. Have an adult demonstrate before having the kids line up and try.
3. Remind your group that they may make mistakes and that is OK.
4. Use a timer to see how quickly each child can complete the hopscotch.
5. Have each child go twice and see if they can improve on their time.

AS YOU PLAY:

"Hopscotch" comes from "hop" meaning "to jump" and "escocher", an Old French word meaning "to cut".

NO-HANDS CUP STACKING CHALLENGE

Levels: K through 5th
Time: 10 to 15 minutes



OBJECTIVES

Teamwork is essential for scientists because many scientific challenges are too complex to be solved by just one person. Collaboration allows scientists to combine their unique skills, knowledge, and perspectives, leading to more innovative solutions and breakthroughs. Working in teams also encourages the sharing of ideas, which can spark new insights and lead to better problem-solving. Additionally, teamwork helps distribute the workload, making large research projects more manageable and efficient. It also fosters a supportive environment where scientists can learn from one another, overcome obstacles together, and achieve common goals more effectively. Ultimately, teamwork in science drives progress and advances our understanding of the world.

MATERIALS:

EACH STUDENT NEEDS:

- Cups (Paper or plastic 12 oz size)
- Rubber bands
- String

PREPARATION

Explore effective ways of communication within teams.
Here are some ways teams can effectively work together:
How Teams Communicate
What Makes A Team Great?

Watch this video on how this activity is made:
Cup Stacking- Team Building Activity

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

ACTIVITY

The challenge is for the group to build a pyramid out of the paper cups (3 on the bottom, 2 in the middle, 1 on the top - can be adjusted for more cups). Group members cannot touch the cups with their hands or any other part of their bodies, even if a cup falls over or on the floor. Each person holds onto one of the strings that are attached to the rubber band and they use this device to pick up the cups and place them on top of each other (by pulling the rubber band apart and then bringing it back together over the cups).

WHAT ARE WE LEARNING?

This lab is going to teach:

Communication: the process of sending and receiving information through verbal and non-verbal methods

Creative Thinking: the ability to develop new and different approaches to a problem or a concept. Essentially, creative thought involves processing existing information and experiences, adopting various perspectives, and figuring out new patterns

ACTIVITY

Determine if you will put kids in groups of 4, 5 or 6.

Tie that many equally spaced strings (about 1 ½ feet long) around a single rubber band. (the rubber band needs to be able to stretch and encircle the bottom of your solo cups.

When a group is successful, they may then work together to “unbuild” the pyramid.

Different groups will take different amounts of time to complete the challenge. Afterwards debriefed with the following discussion questions:

- Was anyone frustrated at all during the activity? If so, how did you handle it?
- What did you learn about yourself or others?

ACTIVITY

1. What did you learn about your team members that you didn’t know before?
2. What communication methods did your team use?
3. Did everyone agree with the idea for the balloon sculpture? If not, did you have to compromise?
4. How well did you work as a team?
5. Did others in the team listen to your opinion? Did everyone have their input?
6. Did anyone emerge as a leader, and how did having a leader help?
7. Was anyone frustrated at all during the activity? If so, how did you handle it?
8. What did you learn about yourself or others?

SCIENTISTS & TEAMWORK

Scientists need to have effective teamwork because solving big problems often requires different skills and ideas. When scientists work together, they can share their knowledge, learn from each other, and come up with better solutions. Teamwork also helps them to complete projects faster and avoid mistakes by checking each other's work. By working as a team, scientists can make discoveries that help improve our world

ADD ON TO THIS CRAFT:

Extensions to continue this experiment:

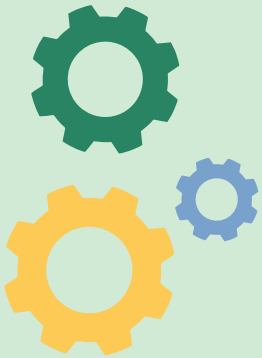
1. Use a permanent marker to label the bottoms of cups with pairs of shapes. (EX. 2 hearts, 2 squares, 2 triangles, 2 circles, 2 spirals)

2. Kids can use their string and rubber band tools to stack “like” pairs, one cup on top of the other, again without using their hands and by using teamwork.

3. Put an empty basket or box on the table and have teams attempt to stack the cups in the container

STRESS MANAGEMENT

& Team Building Skills



Stress Management

Stress & Stress Management

Stress is the body's response to challenging or demanding situations. It can be caused by various factors such as work pressure, deadlines, interpersonal conflicts, or changes in circumstances. Stress can manifest physically, emotionally, and mentally, leading to symptoms like anxiety, fatigue, irritability, and difficulty concentrating.
Stress management refers to the techniques and strategies used to control and reduce stress levels. This can include activities like exercise, relaxation techniques, time management, setting realistic goals, and seeking social support. Effective stress management helps individuals maintain balance, productivity, and well-being in their daily lives.

Why is Stress Management Important for Team Building:

Enhances Team Performance: When team members manage stress effectively, they can maintain focus and productivity. This leads to better performance and higher-quality work, contributing to the overall success of the team.

Promotes Healthy Communication: Stress can often lead to misunderstandings and conflicts. Effective stress management helps individuals stay calm and communicate more clearly and respectfully, which is essential for resolving issues and maintaining team harmony.

Increases Resilience: Teams that practice good stress management are more resilient and better equipped to handle challenges and setbacks. This resilience helps the team bounce back quickly and continue working towards their goals.

Fosters a Positive Work Environment: Managing stress reduces negative emotions such as frustration and anger, creating a more positive and supportive work environment. A positive atmosphere encourages teamwork, creativity, and collaboration.

NINJA STRESS BALLS

An activity designed to teach a healthy way to relieve stress

Levels: K through 5th
Time: 15 to 20 minutes

OBJECTIVES

Begin by talking about what stress is and what a person can do to get rid of stress. Have kids share what they do when they feel stressed. Then touch base on the following suggestions: Exercise/moving around, deep breathing, think of something happy and relaxing, do something fun/something they enjoy, listen to music, journal, eat a healthy snack, and talk to someone who you trust to help you work through the stress. Tell the kids that they will have the chance to create two items to take home today that they can use for fun and to help if they are feeling stressed. They will be making STRESS BALLS.

PREPARATION

Watch this video on how to properly use a stressball:
How to Use A Stress Ball

Watch this video on how this activity is made:
Ninja Stress Balls

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

ACTIVITY

Step 1: Fill a baggie with 3/4 cup of flour. Filling a baggie is much easier than stuffing a balloon with flour!
Step 2: Fold over the baggie and squeeze out all the air. Cut the blowing end off of a white balloon so that you are left with a round balloon with a hole.
Step 3: Stuff the baggie filled with flour into the balloon.
Step 4: Cut off the blowing end of another balloon. Cut an opening for the ninja's face. Then, stretch this balloon over the white balloon with the opening facing the opposite way (so that the flour baggie can't come out). Add a ninja face with a ballpoint pen. We tried Sharpie initially, and the faces kept rubbing off when the boys played with them. We made another ninja ball and used a ballpoint pen, and the face still looks great even after lots of handling. If you find that even ballpoint pen ink comes off, try a different pen.

MATERIALS:

EACH STUDENT NEEDS:

- Balloons – white or yellow for the face, and other colors for the ninja mask
- Scissors
- Sandwich baggies – either fold-over or ziploc (if you use ziploc, you'll have to cut the zipper off)
- Flour
- Ballpoint pen

TIPS

If you don't want the hassle of needing to clean up flour, you can also use play-dough inside your stress ball!

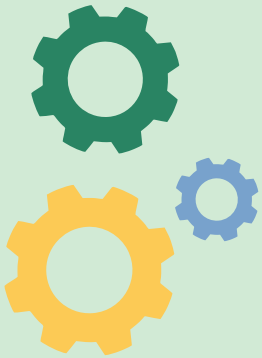
If you decide to go the play dough route, I would highly recommend making your play dough as it took 1.5 cans to fill each balloon.

REFLECTION

How do you think squeezing or playing with your stress toy might help you feel calmer or less stressed?

What else do you do when you are stressed? Is it helpful or unhelpful?

What other toys could you make to help you relieve stress?



Stress Management

More Ways To Manage Stress

1. Physical Activity

- **Exercise:** Regular physical activity, such as walking, jogging, yoga, or swimming, helps reduce stress by releasing endorphins, which are natural mood lifters.
- **Deep Breathing Exercises:** Practicing deep breathing or meditation can calm the mind and reduce stress by lowering the heart rate and relaxing muscles.

2. Time Management

- **Prioritizing Tasks:** Breaking down tasks into smaller, manageable steps and focusing on one thing at a time can prevent feeling overwhelmed.
- **Setting Realistic Goals:** Setting achievable goals and deadlines helps reduce the pressure of trying to accomplish too much at once.

3. Relaxation Techniques

- **Mindfulness and Meditation:** Practicing mindfulness or meditation helps in staying focused on the present moment and reducing anxiety about the future.
- **Progressive Muscle Relaxation:** This involves tensing and then gradually relaxing different muscle groups to reduce physical tension.

4. Healthy Lifestyle Choices

- **Balanced Diet:** Eating a nutritious diet helps maintain energy levels and reduce the impact of stress on the body.
- **Adequate Sleep:** Getting enough sleep is crucial for stress recovery and maintaining overall well-being.

5. Social Support

- **Talking to Someone:** Sharing your thoughts and feelings with friends, family, or a counselor can provide relief and new perspectives on stressful situations.
- B**uilding a Support Network:** Surrounding yourself with supportive people who can offer help and advice when needed can reduce feelings of isolation and stress.

6. Hobbies and Leisure Activities

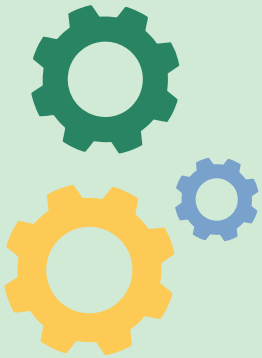
- E**ngaging in Hobbies:** Spending time on activities you enjoy, such as reading, painting, or playing music, can provide a break from stress and boost your mood.
- **Taking Breaks:** Regular breaks during work or study can prevent burnout and help you stay refreshed and focused.

7. Positive Thinking and Attitude

- **Practicing Gratitude:** Focusing on the positive aspects of your life and being thankful for them can help shift your mindset and reduce stress.
- **Self-Compassion:** Treating yourself with kindness and understanding, especially during challenging times, can help reduce self-imposed stress.

COORDINATION

& Team Building Skills



Coordination

Coordination

Coordination is the process of organizing and aligning the activities, efforts, and resources of a team to achieve a common goal. It involves clear communication, effective planning, and the synchronization of individual tasks to ensure that everyone is working efficiently and harmoniously together.

Why is Coordination Important for Team Building:

Ensures Efficiency: Good coordination ensures that all team members know their roles and responsibilities, reducing overlap and wasted effort. This leads to more efficient work processes and helps the team meet deadlines and goals effectively.

Promotes Clear Communication: Coordination involves keeping everyone informed about what needs to be done and when. Clear communication prevents misunderstandings and ensures that everyone is on the same page, which is crucial for successful teamwork.

Facilitates Problem-Solving: When a team is well-coordinated, it's easier to identify and address issues as they arise. Members can quickly adapt to changes or challenges because they understand how their work fits into the larger picture.

Enhances Productivity: By aligning tasks and activities, coordination helps team members work together more productively. It ensures that everyone's efforts are contributing directly to the team's objectives.

Builds Trust and Dependability: When a team is well-coordinated, members learn to rely on each other to fulfill their roles. This trust and dependability are key to building strong, cohesive teams where everyone can work together effectively.

Optimizes Resource Use: Coordination helps in the optimal use of resources, such as time, tools, and skills. By avoiding duplication of effort and ensuring that resources are used where they are most needed, the team can achieve its goals more effectively.

POOL NOODLE FRISBEE RACE

A S.T.E.A.M. activity designed to explore balance, coordination, and teamwork

Levels: K through 5th
Time: 10 to 15 Minutes per relay

OBJECTIVES

The objective of this game is for teams to complete a relay race by balancing a frisbee on top of a pool noodle while moving through a designated course. Each team member takes turns performing the challenge, and the first team to have all members successfully finish the course wins. The game is repeated multiple times to allow participants to improve their balancing skills and support their teammates. This activity helps children develop better balance and coordination as they practice keeping the frisbee steady on the pool noodle. It also teaches perseverance and focus, as players must restart if they drop the frisbee, encouraging them to stay determined and patient. Additionally, the game fosters teamwork and cooperation, as kids cheer on and support their teammates throughout the relay.

MATERIALS:

EACH STUDENT NEEDS:

- Jumbo Craft Sticks
- Pipe Cleaners
- 2 Clothespins (that clip)
- Permanent Markers
- Googly Eyes
- Cupcake Liners
- Construction Paper

PREPARATION

If you want to work on the students' balance and coordination, watch this video and practice the exercises:
Balance and Co-Ordination

Watch this video on how this activity is played:
Pool Noodle Frisbee Race
Pool Noodle Frisbee Race

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

AS YOU PLAY

Encourage the players to use proper communication and teamwork skills and use this game as an opportunity to practice patience.

VOCABULARY

Words to know for this activity

Balance: the ability to maintain a controlled body position during task performance, whether it is sitting at a table, walking the balance beam, or stepping up onto a curb

Coordination: the ability to use different parts of the body together smoothly and efficiently to complete a task.

Teamwork: when a group of people work together to achieve a common goal. It can involve sharing ideas, communicating, and supporting each other to use their strengths to complete a task more efficiently.

ACTIVITY

1. Teams line up at the starting line. The first person in line holds the pool noodle in one hand and a frisbee in another.

2. On “go” the first person in each line balances the frisbee on top of the pool noodle and then walks/runs to the finish line cone, runs around the cone and back to the starting line where they hand off the the frisbee and pool noodle to their team mate next in line.

3. If they drop the frisbee, they have to return to the starting line, balance their frisbee on top again and start again.

4. Repeat relay 2-3 times so kids have a chance to improve their balancing skills and encourage their team mates.

Hints for younger participants:
If they drop the frisbee, have them stop where they are at, rebalance the frisbee, and continue without returning to the starting line.

Using shorter pool noodles and having them hold the noodle nearer to the top will be easier and less frustrating.

REFLECTION

Questions for after the activity

1. What strategies did you use to keep the frisbee balanced on the pool noodle, and did those strategies change as you practiced?

2. How did it feel when you had to restart after dropping the frisbee, and what did you do differently on your next attempt?

3. What was the most challenging part of the relay, and how did you overcome that challenge?

4. How did your team work together to encourage and support each other during the game?

5. If you could change one thing about the game to make it easier or more fun, what would it be and why?

ROCK, PAPER, SCISSORS ACTIVE GAME

Levels: K through 5th
Time: 15 to 20 minutes

OBJECTIVES

An active twist on a classic childhood game that encourages moving the body, coordination, teamwork, encouragement and having FUN!

PREPARATION

Watch this video on how this activity is made:
Rock, Paper, Scissors Active Game

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

MATERIALS:

EACH STUDENT NEEDS:

- Hula hoops or 1 inch thick floor tiles (3'x3')
- Large open space

AS YOU PLAY

Look for and praise students who are encouraging one another and using words of affirmation.

ACTIVITY

1. Lay out the hula hoops in a line. They don't have to be perfectly straight - it's more fun if they zig-zag - but there should be only one clear path through them. Each hula hoop should be within hopping distance of the one before and after it.
2. Give a quick tutorial on how to play "Rock, Paper, Scissors." Have kids practice with a partner.
3. Split the kids into two teams and have them lineup on opposite sides of the path.
4. When you say "GO!" the first player on each team must begin hopping through the hula hoops toward the other side.
5. When players meet in a hula hoop they must have a rock paper scissors showdown to determine who continues on.
6. The losing player exits the path and goes to the end of their line, and their next teammate in line immediately begins hopping through the path. It's important that the children are watching their teammate and jump in as soon as the battle is lost so they can prevent the other team from moving as much as possible!
7. When one player reaches the other side, pause the game and give that team a point.
8. After points are scored, play continues.

REFLECTION

Questions to ask after the activity

1. How did you feel when you were hopping through the hula hoops and had to face off in a rock-paper-scissors challenge? What strategy did you use to win?
2. How did your team work together to make sure the next player was ready to jump in as soon as a teammate lost the rock-paper-scissors showdown?
3. What was the most exciting part of the game for you, and how did it feel when your team earned a point?
4. How did you and your teammates encourage each other during the game, and why is it important to support one another?
5. If you could change one thing about the game, what would it be and why?

TAILS

An activity designed to explore quick thinking, strategy, and agility

Levels: K through 5th
Time: 10 to 15 minutes

OBJECTIVES

The objective of the "Tail Capture" game is for children to protect their own "tail" while trying to capture the tails of other players. Each time a player loses their tail, they perform a fun fitness activity before rejoining the game. Through this activity, kids can learn the importance of agility, quick thinking, and strategy as they navigate the play space. Additionally, the game encourages physical fitness and resilience, as players must keep moving and adapt their approach to succeed.

PREPARATION

Watch this video on how this activity is played:
Tail Tag

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

ACTIVITY

1. Each child tucks a 'tail' into the back of their shorts/pants.

2. The children run around the play space trying to capture the tails of the other players whilst also keeping their tails safe.

3. If a child's tail is captured, they perform a pre-agreed fitness activity – e.g. 5 jumping jacks or hopping on one foot for 10 times. They can then rejoin the game, trying to capture a new tail from another player.

4. Play ends after a specified period or when one child captures all of the tails.

MATERIALS:

EACH STUDENT NEEDS:

- One sock, bandana or fabric square to act as a tail for each child.
- A clearly designated open space for the children to run around in.

AS YOU PLAY

Celebrate "positives" you see in sportsmanship and encouragement from the students and teams!

REFLECTION

Questions to ask at the end of the activity

1. What strategies did you use to keep your tail safe while trying to capture others' tails, and did your approach change as the game went on?

2. How did it feel when your tail was captured, and what was your favorite fitness activity to perform before rejoining the game?

3. What was the most challenging part of the game, and how did you overcome it?

How did you balance between being quick and staying aware of your surroundings to avoid losing your tail?

4. If you could add a new rule or twist to the game, what would it be and why?

TOWEL RACE RELAY

Levels: K through 5th
Time: 10 to 15 minutes

OBJECTIVES

The objective of this game is for kids to race to a designated point and back using only two towels to step on, without touching the ground. Through this activity, children learn problem-solving and coordination as they strategize how to move efficiently while balancing on the towels. The game also encourages teamwork, as players must complete their leg of the race quickly to help their team succeed. Additionally, it helps build physical fitness and fosters a sense of friendly competition.

PREPARATION

Watch this video on how this activity is made:
Towel Race Relay

It's best to do this experiment at least once before teaching the students to 1) ensure you know how the experiment works, and 2) to have a few examples of what the project will look like.

ACTIVITY

1. Divide kids into 2 teams.
2. Use cones for starting line and turning around line.
3. Each player must race to the turnaround point and back stepping only on their two towels.
4. Kids line up in single file lines at the starting line.
5. The first person in line holds both towels in their hand.
6. On "Go" the first student lays down the first towel and steps on it. They then, lays the second towel in front and steps on it. He then reaches back and moves the first towel forward to step on.....and so on and so on to the turn around point.
7. At the turn around point, the student picks up both towels and races back to the finish line where they hand the towels to the next student in line.

MATERIALS:

EACH STUDENT NEEDS:

- 2 hand towels for each team
- Large open space
- Cones to mark starting line and turning around spot

AS YOU PLAY

Celebrate "positives" you see in sportsmanship and encouragement from the students and teams!

OTHER OPTIONS

Try the race facing backwards.
Try using only one hand during the relay race.

REFLECTION

How did you work with your teammates to ensure a smooth transition when handing off the towels, and what was the most challenging part of the relay?

Did you change your approach after watching other players, and if so, what did you learn from observing them?

REVIEW

what have we learned?

Review

What have we learned?

Review

Create a dialogue with the students about what they have learned. Ask questions about each activity and lab they have completed and discuss how each activity has helped them become better engineers. Let the students take turns and discuss with an open conversation

Questions

Let the students have an open discussion on what they have learned. If you feel as though you won't need questions to direct the conversation, don't use them! If you have other questions you would like to ask, ask them! This review is completely up to you and the students- let them take the lead on the discussion!

1. Why is teamwork essential for scientists when solving complex problems?
2. How do diverse perspectives contribute to innovation in scientific research?
3. What are some benefits of sharing the workload among team members in scientific research?
4. What are listening skills, and how do they contribute to effective communication in a team?
5. In what ways does good listening build trust within a team?
6. Why is listening important for resolving conflicts within a team?
7. Define good sportsmanship and explain its role in fostering a positive team environment.
8. How does practicing good sportsmanship help in preventing conflicts within a team?
9. Why is good sportsmanship important for building team unity and trust?
10. What is patience, and why is it an essential quality for team building?
11. How does patience contribute to effective problem-solving in a team?
12. In what ways can patience reduce stress and improve communication among team members?
13. Define stress and explain the importance of managing it in a team setting.
14. What are some effective stress management techniques that can improve team performance?
15. How can stress management prevent burnout and support a positive work environment in a team?
16. What is coordination, and why is it crucial for team efficiency?
17. How does good coordination enhance communication and problem-solving within a team?
18. Why is coordination important for optimizing the use of resources in a team?

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