

Winter Olympics

STEM

Challenge Cards



Bobsled Dash

Sport: Bobsled

Materials:

- 1 toilet paper roll
- 4 bottle caps
- Tape
- Small ramp (books + cardboard)

Challenge:

Design a bobsled that rolls **the farthest distance** down the ramp.

Directions:

1. Attach bottle caps to the toilet paper roll as wheels.
2. Tape securely.
3. Release from the top of the ramp.
4. Measure how far it travels.
5. Redesign and try again!



Figure Skating Spin

Sport: Figure Skating

Materials:

- Paper
- Pencil
- Scissors
- Coin

Challenge:

Create a spinner that **spins the longest**.

Directions:

1. Cut out or fold a paper shape.
2. Tape a coin to the center.
3. Spin it on a flat surface.
4. Time how long it spins.
5. Adjust your design and test again.



Ski Jump Launch

Sport: Ski Jumping

Materials:

- Craft sticks
- Tape
- Small pom-pom or cotton ball

Challenge:

Launch your skier **the farthest distance**.

Directions:

1. Build a launcher using craft sticks and tape.
2. Place the pom-pom on the launcher.
3. Press and release.
4. Measure how far it travels.
5. Improve your launcher and try again.



Snowboard Balance

Sport: Snowboarding

Materials:

- Craft stick
- Small eraser or “snowboarder” made out of pipe cleaners

Challenge:

Balance your snowboarder for the **longest time**.

Directions:

1. Place the eraser (or your pipe cleaner snowboarder for an extra challenge) on the craft stick.
2. Balance it on one finger or table edge.
3. Time how long it stays balanced.
4. Try different placements to improve.



Curling Target Shot

Sport: Curling

Materials:

- Paper (target)
- Bottle cap or coin
- Tape line on floor

Challenge:

Slide your stone **closest to the center** of the target.

Directions:

1. Place the target on the floor.
2. Slide the bottle cap from behind the line.
3. Measure how close it gets to the center.
4. Adjust force and try again.



Hockey Slap Shot

Sport: Ice Hockey

Materials:

- Straw or craft stick
- Cotton ball or pom-pom
- Paper
- Tape

Challenge:

Score the **most goals** in three tries.

Directions:

1. Create a goal using paper and tape.
2. Use the straw or stick to hit the ball.
3. Aim carefully!
4. Count how many goals you score.
5. Change your technique and retry.



Skeleton Speed Run

Sport: Skeleton

Materials:

- Cardboard rectangle
- Paper
- Coins
- Tape
- Ramp

Challenge:

Create a sled that reaches the **bottom the fastest**.

Directions:

1. Create a sled with cardboard and paper.
2. Tape coins onto the cardboard sled.
3. Place it at the top of the ramp.
4. Release and time the run.
5. Adjust weight placement and race again.



Biathlon Accuracy

Sport: Biathlon

Materials:

- Paper targets
- Cotton balls
- Spoon

Challenge:

Hit the **most targets** in five tries.

Directions:

1. Place targets on a table or floor.
2. Use the spoon to launch cotton balls.
3. Aim carefully and launch.
4. Count hits.
5. Adjust technique and try again.

