

Name: _____

Dippin' Dinos! Pushing & Pulling

The following pictures show different kind of forces. Label each one as a push or a pull, and describe the motion:



a) Push / Pull ; Motion _____

b) Push / Pull ; Motion _____

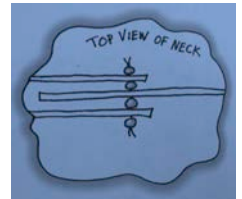
c) Push / Pull ; Motion _____

d) Push / Pull ; Motion _____

Up & Down Dino

Materials:

- Pencil
- Posterboard & Corrugated Cardboard
- Scissors
- Coloured Markers
- Hole Punch
- String (15cm)
- Metal Nut
- 4 Plastic Beads
- Thread & Needle
- Glue



Instructions:

1. Trace the dino shape onto the posterboard and cut it out. Cut the base from the corrugated cardboard. Decorate with the markers, if you wish.

3. Assemble the neck as shown using the beads and thread. Fold the tabs on the dino's feet and glue them to the cardboard base.

2. Punch holes in the head and body where shown. Make the weight by adding the nut to the string, and tie it to the two bottom holes on the dino's head.

4. To work the dino, hold the handle and move it so the nut swings back and forth.

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Talk About It!

1. What's happening as the nut swings below the dino's head?
2. What's happening as the nut swings below the dino's body?
3. Why is it easier to jump off a chair than back on?



Practical Pendulums!

A **pendulum** is made by hanging an object from something else. When you pull a pendulum and let it go, it swings back and forth in the same pattern.

You can find pendulums in grandfather clocks! Why do you think they are used to keep time?

What force do you think pulls the pendulum down towards the ground?

Why do you think a pendulum slows down over time?



Fun Foucault Facts:

Leon Foucault was a French scientist who wanted to prove the Earth spins around each day. In 1851, he built a huge pendulum with a cannon ball weighing 60lbs (about 4 bowling balls) and a big wire that was 67 metres long (about 6 school busses)! He put a sand pit beneath it to see the pattern the cannon ball traced. If the Earth didn't spin, we would just see one straight line, but Foucault noticed that the pendulum seemed to be moving:



The Earth was actually spinning beneath the pendulum! Foucault proved the Earth spins using his invention.

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