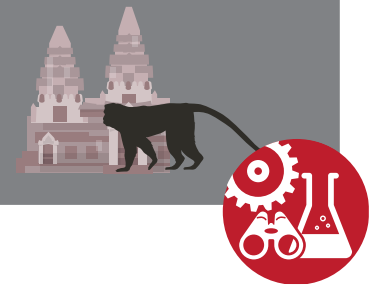


CARTESIAN DIVER

MONKEY CITY
Creative Expression



THE ADVENTURE:

Buoyancy is a measure of how well something floats (or not!) Build a Cartesian Diver in a bottle to explore how water and air pressure can affect your ability to float. Control the motion of the diver by squeezing and releasing the bottle, forcing the diver to move up or down.

PLAN:

- What do you know about water pressure? Air pressure?
- What do you know about buoyancy?
- What will you use to build your diver?

DO:

- Clean any labels off your pop bottle so you can see what is happening.
- Build your diver so that it floats vertically just below the surface of the water.
- Fill your empty bottle with water.
- Drop the diver into the bottle and screw the lid on tight.
- Give your bottle a squeeze. What happens?

REVIEW:

- What do you know now that you did not know before?
- What happened to the diver when you squeezed the bottle? When you let go?
- What forces are acting on the diver?
- What do you think would happen if the diver was less heavy?
- How do you think this relates to a scuba diver?
- What elements of STEM are in this adventure? Science? Technology? Engineering? Mathematics?
- What did you like about this adventure? What did you not like? How would you do this adventure differently?

MATERIALS:

- 1 litre pop bottle and lid
- 5 mL eyedropper
- Something to use to make a diver, such as:
 - An eyedropper
 - A plastic pipette and a metal nut
 - A pen cap with no hole and some modelling clay

SAFETY TIP:

- Be sure to clean up any water that has spilled. Water on the floor can cause slipping.

ONLINE RESOURCES:

- Make a Cartesian Diver
- Cartesian diver
- Soda Bottle Diver

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It starts with Scouts