REFRACTION CIRCUS INSTRUCTIONS

**THE SURPRISING COIN**

• When the cup is
empty, look at the coin.

• Move to the side until you
can no longer see the coin
over the edge of the cup.

• Keep still, looking at the cup.

• Ask a partner slowly to
fill the cup with water, not
touching or moving the cup.

• Don’t move your head.
Keep looking at the coin and
notice what happens.

• Empty the water from
the cup back into
the water
container and
try it again.

**WATER MAGNIFIER**

• Look at the sheet of newspaper closely.

• Place the plastic sheet over the newspaper and look at the print closely, to see if there is any change.

• Use the matchstick to transfer a small drop of water from the cup to the sheet of plastic; you may need a few drops but don’t put too much on.

• Look at the writing through the drop of water. Is anything different? Try sliding the plastic sheet gently from side to side.

• Now try looking at the newspaper through a magnifying glass and a glass bead. See if you can make any more observations, to compare what you can see with a normal eye and through a water drop, a magnifying glass and a glass bead.



REFRACTION CIRCUS INSTRUCTIONS



water

oil

**AMAZING ARROWS**

• Take the
card with
the three
arrows on
and hold it
behind the
jar of water.

• Move the card around a little behind
the water jar and notice
what happens
to the arrows.

• Turn the card
around and repeat
the activity.

water

oil

**OIL, WATER AND A PENCIL**

• Look at the
pencil and
check that it is
straight, not bent.

• Move you head so it
is on a level with the
jar from the side.

• Ask your partner to place and
hold the pencil upright into the jar.

• Observe what the pencil looks like.

• Ask your partner to tilt the pencil from
side to side, keeping
the bottom of the
pencil touching the
bottom of the beaker
in the middle.
Observe what
the pencil
looks like.