

## Praxis “Making Science Fun”

### Eggsellent Easter – Hard Boiled or Raw?

How can you tell if an egg is raw or hard boiled without breaking it open?

#### Materials:

- 2 raw eggs
- 1 Hardboiled egg
- A partner

**Procedure:** (Remember to be sure to have your parent’s permission and they have the time to watch and help you.)

- Present your partner with the eggs and ask them to tell you which one is the hardboiled egg and which one is the raw egg without breaking them. Let them examine the eggs until they either make a guess or give up. Tell them that there is a secret method to detecting which is the cooked egg.
- Lay each egg down on a flat surface and spin them the long way like a top. Try to get them all spinning at the same time if you can, then ask your partner which one is different.



#### What's happening?

Raw eggs wobble when you spin them. When you spin the raw eggs, the yolks and whites are also moving inside the eggshell. The inertia of spinning causes the inside of the egg to move at a different speed than the outside of the egg because its mass is different they wobble.

Hardboiled eggs spin. The hardboiled egg doesn't wobble because cooking the egg has made the inside of the egg solid and less affected by inertia.

#### Eggstension:

Touch each of the spinning eggs lightly as it's spinning to stop it and then quickly lift the finger off. What happened? The two raw eggs will start moving again even after you've tried to stop them because of the inertia of the fluids inside the raw egg is still moving. The hardboiled egg will stop spinning completely when you touch it because the inside is solid and its internal inertia is the same as the outside shell. See <http://www.kidcraftsmagazine.com/> for more eggacting science eggperiments.

This activity is based on our seasonal “Easter” Learning Kit. Our teaching kits (described on our website) are loaned out FREE to provide classroom teachers and parents of home schooled children an opportunity to explore Science in interesting ways. Please consider volunteering as one of our classroom speakers or allow your business as a field trip location.



Our next major event that Praxis is involved with is the Kiwanis Regional South East Alberta Science Fair on March 24<sup>th</sup>. For more information check out our Praxis website and their website at: <http://www.seab-sciencefair.com/>

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