**Dive Response Investigation Extension**

Research it! **Human Dive Reflex? (Get your Physiologist On!)**

This extension empowers students with the locus of control to follow their curiosity about the mammalian dive reflex. Where the shorter investigation seeks to answer the question of whether humans have the dive reflex, the extension lets students design an experiment to test a broader question.

1. After running the investigation investigation to test whether humans have the mammalian dive reflex, prompt students with the following question: What triggers the dive reflex?

2. Students can then develop their own hypotheses and design their own experiments.

Students should use their heart rate as the indicator although body and skin temperature can also be used as an indicator if you have the means to measure it. Your school’s maintenance department may have an infrared laser temperature reader, which can read skin surface temperature.

Encourage students to always measure before and after heart rates and to manipulate just one variable at a time.

Students should be given 20 to 30 minutes to come up with testable hypotheses and preliminary procedures and data collection.

Examples, for your knowledge. Share with Explore Teams who have trouble defining an investigation on their own:

• Breathing through a snorkel in the air and in the cold water bath to test if the water is the trigger

• Submerging face in room-temperature water and then cold water to see if the temperature of the water is a trigger

• Holding breath in air while slumped over, as if face was in the pan to test body/neck position