

# The Swim

## Lesson Packet: The Heart of the Swim

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## Introduction

One of the most important and interesting medical protocols in The Swim concerns Ben's Heart. The Heart Lesson Pack for The Swim provides recommended materials for teachers interested in creating a lesson around the heart protocol in The Swim while connecting with Ben and the crew of Seeker.

The following lesson pack provides recommended materials for teachers interested in creating a lesson around the event. This pack contains multimedia resources, a worksheet, and a standard lesson plan targeting students ages 11-15. While the target age is middle school levels, the lesson pack also highlights some more advanced lesson suggestions.

This pack is designed to be as flexible as possible with various levels of vocabulary, scientific information, and student discussion topics to be added to and changed as befitting the class.

Teachers are encouraged to use the suggested materials at will depending on their class size, background, and curriculum requirements. Discussion topics and student conversation questions are highlighted in **ORANGE**.

We hope your students have as much fun with The Swim as we do!

# Lesson Plan

## Lesson Plan

SUBJECT: Ben Lecomte's The Swim

### LESSON

TITLE: The Heart of The Swim

LESSON LEVEL: Beginner/Intermediate

DURATION:

30-45mins

### OBJECTIVE:

- Students will understand the basic anatomy of the heart and how it interacts with body systems.
- Students will follow Ben's performance across the Pacific Ocean and learn about the many ways this swim can affect the body and the heart
- Students will be able to assess their own heart rate and understand how the heart and its activity are relevant to Ben's swim

### SUMMARY OF TASKS/ACTIONS:

1. (5min) Introduction of teacher, lesson, and the Heart Protocol in The Swim.
2. (10min) Students will watch the linked video in the education page about the role of the heart in the swim Discussion will follow, pointing out the EKG being used and why this protocol is important to Ben.
3. (5min) Discussion about the function of the heart, segue into the worksheet.
4. (15min) Teacher will explain the worksheet and student will take their heart beat, either in groups or alone. Discussion will follow.
5. (5 min) Students will extrapolate Ben's heart rate based from theirs.

## Vocabulary

### Heart

an organ of muscles that pumps blood throughout our body. A heart has four chambers the blood filters through, two atria and two ventricles.

### EKG/ ECG

Short for Electrocardiogram, an EKG/ ECG is a measurement of the electrical activity in the heart

### Pulse

During a heartbeat, the muscles of the heart contract, which forces blood through the arteries. We can feel this contraction, which is our pulse.

### Contract (v)

**(muscle contraction)** to reduce in size by squeezing together

### Endurance sport

An activity that takes place over a long distance and demands a huge amount physical stamina

## Suggested Talking Points on Heart Protocols

Ben is swimming 8 hours a day. Ben is not just swimming, he is **endurance swimming**,

This difference means his body is working much harder than if he were swimming for fun. His body works much harder and this means his heart works much harder too.

**What effects do you think this exercise will have on Ben? What is good? What can be bad about it?**

The EKG/ECG that Ben is using is the same one used to monitor astronauts in space.

**Why is it important that we monitor his heart?**

### The Heart in The Swim

Ben's heart is being monitored by a ECG/EKG- a machine that, when turned on measures electrical activity all over the heart.

When Ben starts his swim, every part of his body works together to propel him forward.

Ben's heart will begin to beat faster to pump blood to his muscles, while his stomach will slow down because digestion is no longer a priority while he is swimming through water which is 784x denser than air.

Swimming for just an hour can burn up to 500 calories; so multiply that by eight Ben needs 4000 calories just to keep his heart and other muscles functioning at optimal performance.

## Student Activity Page

### Finding Your Heart Rate

Have the students guess at what will happen to their pulse after you have explained the exercise to them.

After they finish with their hypothesis, have the students perform a mild activity, for example: jumping jacks or dancing, for a good minute.

Students will take their pulse directly after exercise.

After taking their pulse from their exercise, the students should wait a minute or more before taking their pulse for the last time.

Finally discuss with the students about what actually happened compared to their hypothesis.

**How does your heart rate change when you go from resting to an activity and then back to resting?**

**How do you think Ben's heart rate is when he is swimming for 8 hours without big breaks?**

Name:  
The Swim- Plastics

## Finding Your Heart Rate

How does your heart rate change when you go from resting to an activity and then go back to resting?

### Predictions:

When I rest: \_\_\_\_\_

When I exercise: \_\_\_\_\_

When I rest again: \_\_\_\_\_

	Beats in 10 seconds	Multiply X 6	Heart Rate
At Rest		X6	Resting
After 30 sec of exercise		X6	Active
At Rest		X6	Resting

### Observations:

When I was at rest: \_\_\_\_\_

When I was exercising: \_\_\_\_\_

When I was at rest again: \_\_\_\_\_



## Further Resources

<http://benlecomte.com/science/>

<http://benlecomte.com/heart-intvw/>

EKG in the Swim

<https://www.youtube.com/watch?v=ZLnxzZuhb9Y>

Video discussing the brief anatomy of the heart

<https://www.youtube.com/watch?v=JFSF9n0zu18>

Instruction video discussing how to take a pulse

[https://www.youtube.com/watch?v=W5K\\_HR6hxMY](https://www.youtube.com/watch?v=W5K_HR6hxMY)

<https://www.livehealthyaustin.com/2011/11/01/how-to-take-your-own-pulse-something-everyone-should-know/>