Computational Origami

Introduction

1. Do you remember how old you were when you made your first origami figure?

2. What kind of origami figures do you know how to make?

3. Have you ever designed an original origami figure?

Video: Part 1

Robert Lang is a researcher in the field of *computational origami*.

1. How does Dr. Lang define computational origami?
   `It's the study of...`

2. What kind of origami figures have been thought to be the most difficult?

Video: Part 2

Vocabulary: Make sure you know the meanings of the underlined words below.

1. These pieces are geometric in nature.

2. They have applications in the real world.

3. The telescope is 6 meters in diameter.

4. The surface of the lens is made of glass.

5. The device is implemented with hinges so that it can collapse onto itself.

6. A blocked artery can lead to congestive heart failure.

7. There's a lot of nano-research going on at Cal-Tech.

Pre-listening:

1. What kind of applications do you think origami might have for technology?

2. What kind of applications do you think origami might have for medicine?

Listening: Watch the video and listen for the answers to these questions.

1. According to Dr. Lang, what problem does origami solve?

2. What two technological applications of origami does Dr. Lang describe?

3. What was the basic difficulty of the second application (from Number 2)?

4. What two medical applications of origami does Dr. Lang describe?

5. How does Dr. Lang describe *nano-folding*?

Video, part 3

Pre-listening: Do you think origami has anything in common with tasks we do in our everyday lives? Why or why not?

Listening: Listen and answer the following questions.

1. What daily task does Dr. Lang compare origami to?

2. Which does he say is more difficult?