In this folder you will find a multi-day lesson on mitochondria. Students examine 6 pieces of evidence to work out function of mitochondria. Students are first introduced to the topic as a class and discuss the topic and the 2 models. Then they go through the evidence and do arrows and evidence ratings for each. Throughout they also answer questions with their groups and individually to determine which model they will choose.

**Materials for the teacher**

Teacher guide. Filename: *PRACCIS Teacher Packet FOR LESSON 3*. The first item to look at is the teacher’s guide. This gives you a complete understanding of the lesson and how to implement it.

Teacher powerpoint slideshow. Filename: *PRACCIS Mitochondria lesson 3*. This is for the teacher to use throughout this unit. It includes slides with directions for what students should do, as well as background information. It is in the *ISS Intro to Mito* folder along with the associated audio files.

There is 23 video file associated with this slideshow. They have the following titles, and to run properly, they must be in the same folder as the slideshow itself.

*PRACCIS Slide 2, PRACCIS Slide 3, PRACCIS Slide 4, PRACCIS Slide 5, PRACCIS Slide 6, PRACCIS Slide 7, PRACCIS Slide 8, PRACCIS Slide 9, PRACCIS Slide 10, PRACCIS Slide 11, PRACCIS Slide 12, PRACCIS Slide 17, PRACCIS Slide 18, PRACCIS Slide 19, PRACCIS Slide 20, PRACCIS Slide 21, PRACCIS Slide 22, PRACCIS Slide 23, PRACCIS Slide 24, PRACCIS Slide 28, PRACCIS Slide 29, PRACCIS Slide 30, PRACCIS Slide 31*

**Materials for the students**

Student packet. Filename: *PRACCIS CELLS Student Packet*. The student packet includes some information needed for the lesson as well as questions for students to answer individually and in pairs or groups.

Student powerpoint slideshows. Filenames:

*PRACCIS Mitochondria Evidence 1-3 Blogs*

*PRACCIS Mitochondria Evidence 5*. These contain evidence 1-3 and evidence 5 for the students to look at with their groups at certain times during the lesson.

There is 2 video file associated with this slideshow. They have the following titles, and to run properly, they must be in the same folder as the slideshow itself.

*PRACCIS Evi 1-3 flagella*

*PRACCIS Evi 1-3 hamster*

**Summary of where to find models and evidence**

**Two models and six pieces of evidence are used in this lesson.**

Model 1 first appears on slide 20 of the teacher powerpoint and page 1 of the student packet.

Model 2 first appears on slide 20 of the teacher powerpoint and page 1 of the student packet.

Evidence 1 first appears on slide 1 of the student powerpoint and slide 11 of the teacher powerpoint.

Evidence 2 first appears on slide 11 of the student powerpoint.

Evidence 3 first appears on slide 18 of the student powerpoint.

Evidence 4 first appears on page 5 of the student powerpoint.

Evidence 5 first appears on slide 1 of its student powerpoint.

Evidence 6 first appears on page 8 of the student powerpoint.

\*We recommend reading the teacher’s guide first and then familiarizing yourself with the rest of the materials.

\*\*Any mention in teacher packets about different conditions (i.e. M, MC, ME, etc.) can be ignored. You will always have the MC or ME version of the materials to work with.