



4 Genetics

In this module, the students develop the basics of genetics and epigenetics. As participants in a scientific conference, they prepare an opening, an introduction and a PowerPoint slide.

The three tasks are performed in three groups from the beginning.


Introduction


“The idea that genes turn us into puppets and predetermine everything is nothing but superstition.”

Craig Venter, biochemist, born 1946

Split the *Chair*, *Introduction* and *PowerPoint Slide* tasks between three small groups. All groups begin to prepare simultaneously.


 **90 minutes**

 **Tasks:**
*Chair, introduction,
PowerPoint-slide*

 **Material:**
*Chair
Introduction A
Introduction B
PowerPoint slide A
PowerPoint slide B*

Chair


Two students deal with the conference day opening – similar to the conference chair. They briefly introduce the concept of epigenetics. For this they will receive an article and key questions on the topic.

 **35 minutes preparation
10 minutes presentation**

Small group of two students
*Chair exercise sheet
Chair material sheets*

Introduction

Two students perform the task of introducing one researcher. They each receive material (Introduction A and B) and research notes.

 **35 minutes preparation
2 x 5 minutes presentation**

2 small groups of 2 students
*Introduction exercise sheet
Introduction A material sheets
Introduction B material sheets*



**PowerPoint Slide**

Two groups each work on an informative PowerPoint slide. The slide should briefly summarize both topics. The basic rules of good presentations apply:

- 3–6 points on the slide or in a diagram
- clear heading (44 pt.)
- font size at least 28 pt.

Students may use PowerPoint or sketch their slide on paper.

- 🕒 35 minutes preparation
- 2 x 10 minutes presentation
- 2 x 5 minutes questions

2 small groups

PowerPoint-slide exercise sheet
PowerPoint-slide material sheet A
PowerPoint-slide material sheet B

If needed:
computer with PowerPoint

Following their joint preparation time, the groups present their results one after the other and thus reenact the conference day:

- 1) Opening by the Chair
- 2) Introduction of a female and a male scientist
- 3) Two short presentations with PowerPoint slide

Outlook

At the end of the lesson series you can take over the farewell to the conference participants: "Many thanks for the numerous interesting contributions to our conference!"

Afterwards, you can summarize your impressions on the lesson series.

