VIDU
BIOLOGY

Co-funded by the
Erasmus+ Programme
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Task Sheet for Teachers // Module 3 – Video production

"Creative Video!"

Preliminary note: This task sheet is for you, the teacher, and gives a first overview of the main task ideas. Although the task sheet is complete, as always we would appreciate your comments and ideas for improvement. Thank you.

This third module is about full video production. Students will be able to bring together or mix materials they have already created in module 1 and 2, or alternatively design a completely new video production. As in the previous modules, students should work collaboratively and as autonomously as possible:

- **Option 1:** Continue the work from the previous modules (plants in their seasons, organisms in action): students can choose photos / photo series / video clips (also slow-motion or time-lapse clips) that they have created so far, and use additional material, to produce a better learning resource. This could include the use of narration, a video clip to introduce the topic and additional titles / graphics / subtitles to create a stronger message

- **Option 2:** Students can work on a new video. Content could include answering scientific questions connected with birds, micro-organisms, pollinators and plants, or developing a video in a local zoo or aquarium. These ideas are described in more detail on the next page. There is also space to include any biological content you are teaching at the moment or planning to teach (see ideas for Option 2 in the step-by-step guide).

This final module has a strong media production focus. Students can build on their experiences from previous work and develop their media and communication skills.

The step-by-step guide below is based on a general video production. The technical support focusses mainly on video editing. Students work on a "proper" video – which will be a learning resource which has more than one video clip and should also contain an introduction with narration and titles.

Step-by-step guide

Step 1 Preparation	**Get permission**

Get permission

Get written permission from parents (template available: http://vidubiology.eu/content/)

Introduce vidubiology to the students

Focus on the topic option 1: Continue the work from previous modules

Review what you have done in module 1 and / or 2 and decide on your focus for this new video. Student's outcomes from module 1 and / or 2 will be presented on the board.

Which photos exist (option to collect in a group: blossoms, full plants, trees, ..)? What was recorded in video format (option to collect in groups: time-lapse – snails; slow-motion – mouse etc)? Students can choose their own material or material from the class to create a video.

Focus on the topic option 2: Work on a new theme

Choose the theme you would like to use for your project. Introduce the content (possibly connected with your curriculum) – see topic suggestions for option 2 below.

Introduce the production part (support material provided: http://vidubiology.eu/content/)

If applicable, show examples from other European schools for inspiration. See on flickr.

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Developing/topic suggestions for option 2

Here are four ideas for the second option. We hope you can also come up with your own ideas that may focus on other areas of your curriculum:

A. Birds (create feeding places, "a little research station"): flight, feeding, insulation, nesting, behaviour and mating. You can set up a bird restaurant (a bird table or feeding apparatus) as a biology lab and observe birds feeding and their movements from a distance (you can also work with slow-motion if the birds move too fast).

B. Small animals in the ground (changing the environment, temperature, water, food): bring it into the classroom; observe movement, for example, insects (bug, earwig), isopods (woodlice and their relatives), - changing the environment to change their behaviour (temperature, water etc.). Also earthworms, snails, spiders.

C. Pollinators and plants (bees, butterflies, also some birds, even some mammals): the different ways that they transport pollen; how they move around flowers. You could work on a seasonal theme, like spring - the role of insects. You can include macro shots of pollen; combine photos of flowers; germination (from seed to plant).

D. Using a zoo/aquarium/children's zoo workshop (set your own theme and work in a zoo environment): look at how animals have adapted to their environment.

Hint: The vidubiology team worked on a project in Chester zoo. Check out the workshop sheet: http://vidubiology.eu/content/

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	Setting up the project The teacher divides the students in to teams of 2 or 3 and creates a timeline based on the topic and approach; the timeline can be adapted in length according to your biological topic and / or the time you have for the project. You should consider the amount of time that will be needed for post-production of the video, this can be a minimum of 2 hours often more, depending on the sophistication of the video the students want to produce. Teachers plan what kind of (biological) equipment would be useful for different topics. The teacher oversees the hardware the students will use. This could be the students own phones, cameras, tablet PCs or the schools equipment.
Step 2 Planning	**Students plan the project** (student sheet provided: http://vidubiology.eu/content/) *Option 1: Continue the work from module 1 and/or 2* Students screen the outcomes from module 1 and / or 2 and discuss the design of their video: what would you like to show and report in your video? (for example, information about organisms, observation results, curious facts) What format will you use for your video? (tutorial style, blogging style, documentation, ..) Students create a storyboard to bring together the individual elements (template provided). They can include photos, video clips, slow-motion clips or time-lapse videos they have recorded (and selected) already. In the description of the scenes text blocks and/or headlines are prepared, which help add structure to the video or the story. Students can create further photos or short clips or stop-motion-clips to fill gaps in the story telling. In particular, stop-motion-clips are ideal for creating entries, transitions or summaries (template provided). *Option 2: Work on a new theme* Students will need some technical knowledge in order to do option 2. They should be familiar with the methods for module 1 and 2. Students plan an approach; it may be an experimental investigation or an observation of phenomena. They should start with draft ideas/hypothesis and then take it further in a structured way using the process of scientific inquiry (question, hypothesis, plan, implementation, evaluation / interpretation). Students create a storyboard to prepare the recordings (template provided): They select a style in which the video production should be created (e.g. tutorial style, blogging style, documentation); they will need to consider how the photos and/or video clips and/or stop-motion-clips (template provided) are recorded and how they will be combined and edited afterwards (see the technical support section below). They may need to prepare a materials/equipment/apps list. Teachers check the results of their planning, ensure it is appropriate (not too long, and on topic) and oversee the materials/equipment/apps lists This is a good example from Bulgarian students https://www.youtube.com/watch?v=H0mPT9olI7M
Step 3	**Recording video clips** (video tutorial, stop-motion-tutorial, technology support

Shooting	sheet, student technical-info cards: http://vidubiology.eu/content/)
	Students record their video clips and/or stop-motion-clips. Especially with option 2, the students should be aware of the number of clips they record, since this may slow down the post production process.
	Students check the material they have recorded and re-record if necessary.
Step 4 Post-production	**Selecting the photos / videos and putting them together**
	Students go through all the photos / video clips they have taken; evaluate which ones would be the best in describing the topic they have chosen and select their favourite photos / video clips
	Students edit their video according to the storyboard: they include their selected clips, add titles, possible a music track (observe copyright – no commercial music is allowed) and export their production into a video file which can be used for presentation and sharing
Step 5 Presentation	**Presenting the stories / videos in class**
	Students show their presentations to the class, explain their phenomenon and judge each other's productions (see table on worksheet 2 in module 2).
	Students reflect on their experience and what they have learnt.
	The teacher moderates the presentations and brings together the biological findings.
	Teacher uploads / emails videos to the vidubiology team or directly on to a prepared Album on the vidubiology Flickr page. The teacher has the option to present the videos to the parents and / or also use them as learning resources for future lessons.

Share your results

Sharing the process and outcomes is an integral part of your vidubiology projects. Videos can also be shared on the project Flickr page, but also other social platforms. Flickr (in comparison to Instagram) allows people to see photos/videos without needing to log in. Classes and / or students can create their own albums or accounts. We would be happy to include your work in the project Flickr channel and our YouTube playlists: Please do email the project team with the name of your school so that we can set up an Album for you. We will send you logins for the account and the name of your album with a link. You can write to Joel@kindersite.info

https://www.flickr.com/photos/vidubiology

https://www.youtube.com/playlist?list=PLHgH52iw_33n17p3cVoYtjkj2-EfhCaPr

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Technology support sheet: Recording video and editing video

Choice of technology for recording and editing

It is important to decide on and prepare the technology you want to use. Mobile technologies are easier to use. Thought is needed of how you will transfer the video files from the mobile device to the Internet or YouTube, or other video site for your presentation to the class.

- **Working with mobile technologies (smart phones / tablets):** Students record their video clips with mobile technologies and can edit the material immediately. Mobile technologies make the process faster, the camera is more limited though (unless you have very high-tech smart phone). Video editing software we suggest are PowerDirector (Android) or iMovie (Apple). Once the editing is done the video clip needs to be exported, a new video file created. This is the same process as we have shown in the video tutorial about photo stories.

- **"Classic approach": Working with cameras for recording (video cameras, compact cameras with video function) and computers for editing:** Students record their video clips with a camera and then transfer the material to a computer for video editing.. Software solutions include iMovie (MacOS) or Open Shot (Windows). Windows 10 apps are easier to install and use (such as Adobe Premiere Clip, Animotica or Movie Maker in the Windows 10 store).

Editing video (post-production)

Video editing is the creative process of selecting and arranging photos, video clips, graphics, music, sounds and titles and bringing it together in a new video file. It is important that students work together on the editing. The sharing and reflecting on ideas is an important. media educational. step – to understand how messages on video are created and understood.

You will normally go through this process:

- **Importing** your material
- **Editing** your material
- **Exporting** your final production into a new video file

Video editing is time consuming. You will need to decide if this can be done in lesson time or outside of school lessons.

Importing

Before you start with the editing process you will need to prepare all your source files by copying them into one project folder. Your files will include video clips, photos, graphics, music clips and sound clips. If you have used a camera you will need to connect the camera to the computer (normally with a USB lead) or place the camera memory card into the card reader of your computer (if the computer has no reader you will need a separate card reader). If you have recorded with mobile devices you will have everything ready without any additional work. You might only need to find out where your device has stored your recordings.

Editing

Now you can start with the post-production. Go back to your plan (your storyboard) and lay out the videos and photos on the timeline or in the collection depending on the way your software works. Continually watch the development of your video – make photos / video clips shorter by "trimming" them, change the order of the photos / video clips. Add music and sounds and readjust your images. Include titles for the beginning and credits for the end. Consider the use of English subtitles

Be aware of the copyright of visuals and music. It is becoming increasingly hard to find music which can be used and published online. If you have access to musicians or have a music group in your school that can compose music clips this is by far the best option.

Commercial material can under no circumstances be used. You will risk legal consequences if you do.

Exporting

Once all is done and you have viewed and are happy with your video, you can export. This is a process called "rendering" your production into a new video file. All software packages offer pre-sets where you can choose the quality and format of your video. Often there is a "recommend" option. The higher the compression, the lower the file format but also the lower the quality. Choose an option which fits with what you want. Command file formats are based on the .mp4 container.

You can share the file directly, show it in your class or upload it to your school website or to a pre-pared album on the vidubiology Flickr account (you will need the teacher to login for you) or any other online / social media channel.