



# Flipped Learning in Design and Technology

## *Flipped Learning in design and technology*

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### Overview

#### **Project Aims**

Primary:

- to develop flipped learning through the use of Sway, a more seamless way of teaching.

Secondary:

- to improve collaboration and communication between peers inside and outside the classroom
- to promote more effective and efficient use of teachers' time.

#### **Rationale**

- To use flipped learning more effectively it is important that all resources can be easily accessed by **all** individuals
- sharing and collaborating can be difficult when not having access to the right device, it can also be a time consuming process for teachers who are repeatedly organising and uploading files to libraries
- using a VLE encourages students to access a wider range of resources (videos, audio files).

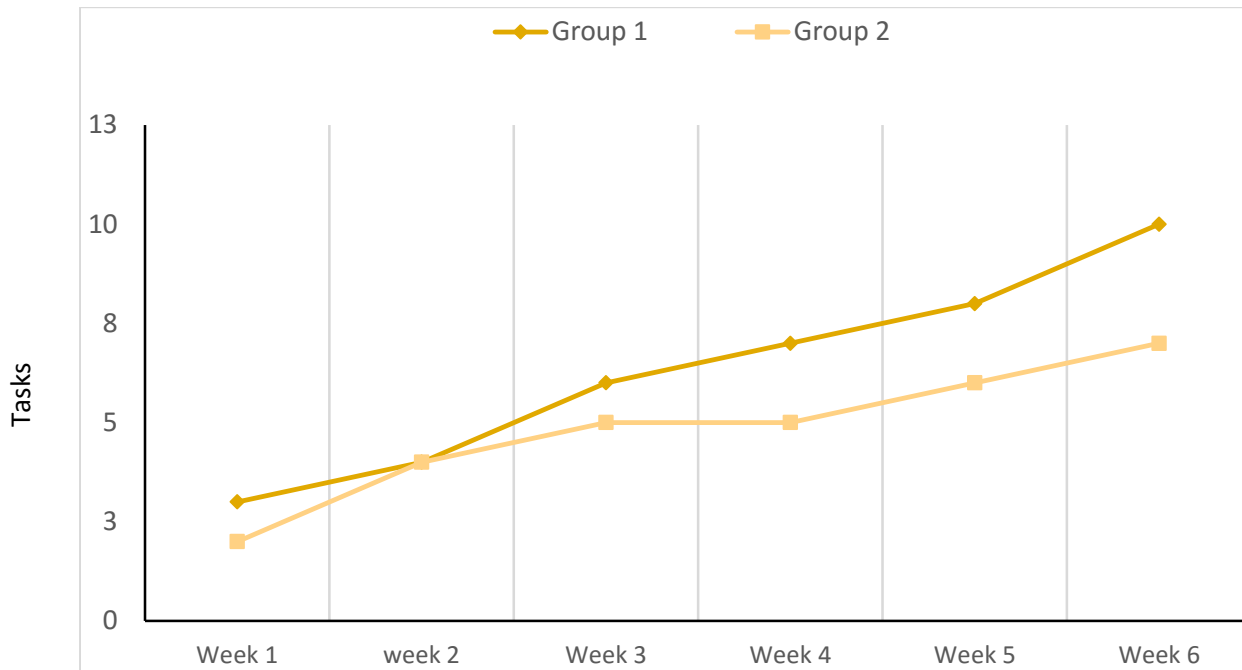
#### **Project Outline**

- Instructional flipped learning videos and resources are made by the teacher and uploaded onto Sway – a seamless wall that others can access from any device for example desktop, laptops, tablets and mobile phones
- all students have 'non-editable' access to the Sway created by the teacher to view flipped learning videos and resources. This could be shared with the students via email/class site.

# Flipped Learning in Design and Technology

## Impact

- Two similar mixed ability year 12 classes of 11 students started their product design portfolio. The groups were set the same ten tasks to complete within six weeks to the same level of attainment. Group 1 worked through their research section using Sway to help them with each task. Group 2 did the same without the use of Sway. The chart below shows how Group 1 was able to complete three more tasks within the given time. This was an impressive result.



- Increased level of engagement in class
- students are able to prepare for the lesson beforehand
- all students become familiar with this format and become more organized, as everything is in one place.



# Flipped Learning in Design and Technology

## Student comments

“Sway is helpful as I can access it from home and school, videos about tasks that we do in lesson, for example questionnaires are put on the Sway and I can use these videos to help me in lesson. This allows me to catch up or progress on my work if I have missed a lesson.”

*(Post 16 student)*

“The use of Sway has improved the collaboration within our class as we can quickly view our tasks which we can all cooperate in. It has also helped us track our progress in lessons, which has helped me identify the specific areas in my work that I need help with.”

*(Design student)*

“Using Microsoft Sway in design and technology has really helped me achieve my goals. Mr Jones is able to test us on what we have done in the lesson and what we need to know by next lesson in a fun way. I am sometimes able to complete my homework using my mobile phone.”

*(Year 8 student)*

## Teacher comments

“Using Sway for homework and flipped learning tasks saves a lot of time in the lesson as the students know exactly where to find all the tasks.”

“Students are much more engaged in my lessons since I have started using Sway, it’s a fun way of teaching the students and a very easy way of putting a lesson together.”

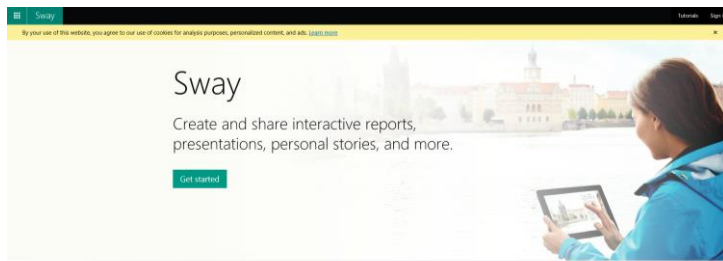
“I am able to link my lessons to industrial practices through setting my students flipped learning tasks on Sway. This allows the students to look at the bigger picture and bring with them a broader knowledge to the lesson.”

## What you will need

- Microsoft Sway log in
- YouTube account
- resources – flipped learning tasks
- means of sharing the resource – email, Office 365
- Microsoft Excel or equivalent.

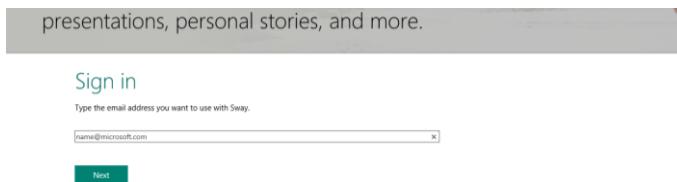
# Flipped Learning in Design and Technology

## Setting up a new Sway

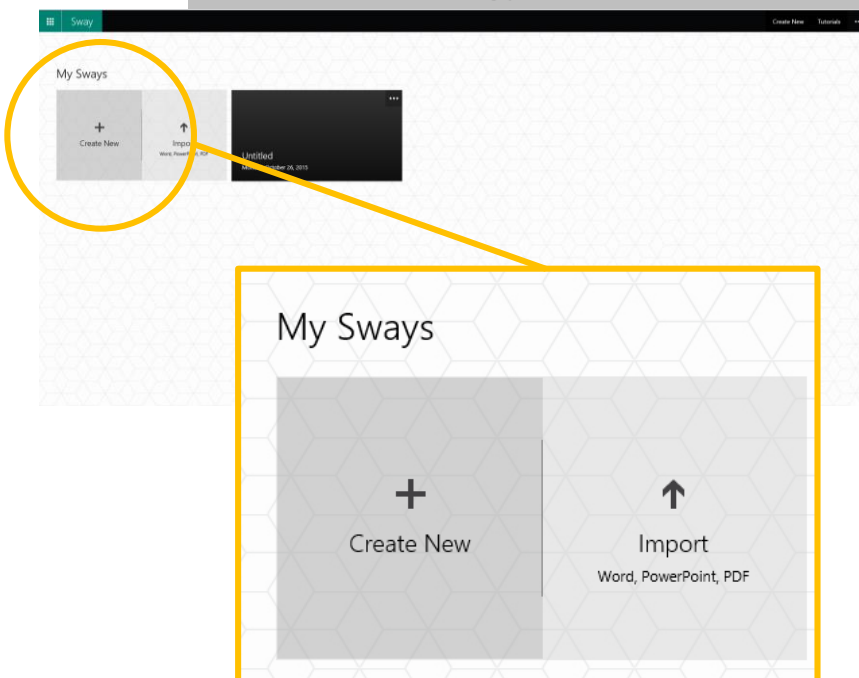


1) Visit – [www.sway.com](http://www.sway.com)

2) Click on the “Get started” button

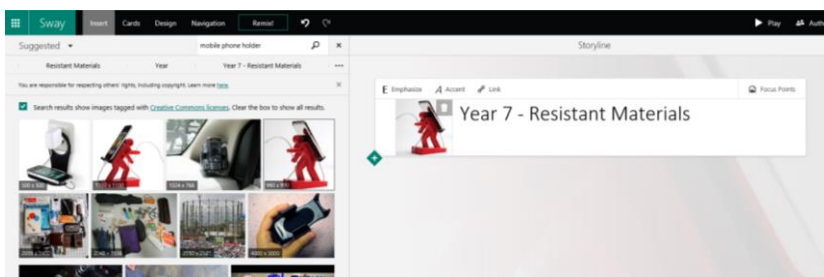


3) Sign in with your Microsoft credentials



4) Click on the “Create New” button, situated on your Sway home screen.

This will open up a brand new Sway board for you to work on.



5) Click on the first storyline box on your page and type in your project title.

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Preview

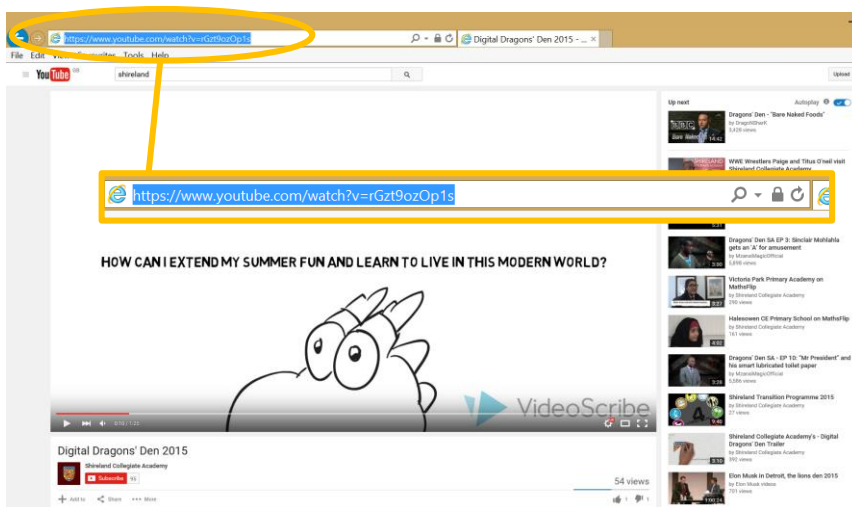
You can also search for a background picture using the search box. Simply drag and drop the picture into your storyline.

Year 7 - Resistant Materials

6) Click on the “Preview” button to preview your Sway.

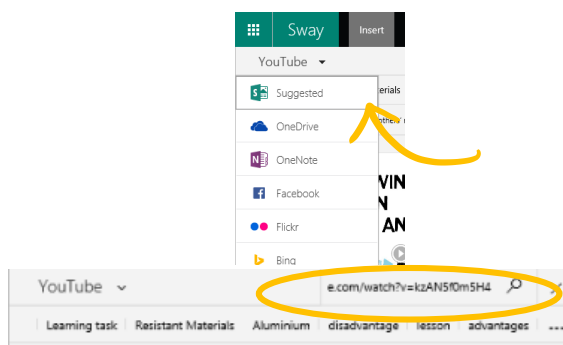
You have now successfully created your Sway.

Inserting a flipped learning video onto Sway



- 1) Set up a YouTube account.
- 2) Film the video using your device.
- 3) Upload your video onto YouTube.

4) Once you have uploaded your video onto YouTube, copy the URL link.

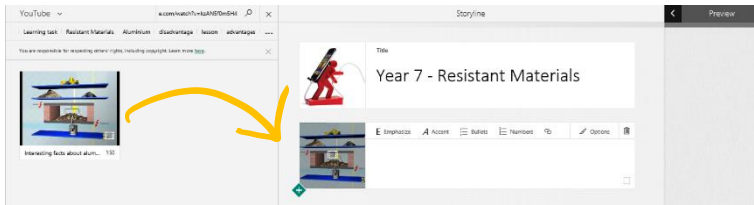


5) Click on ‘Insert’ and then click on the ‘Suggested’ tab. Select ‘YouTube’

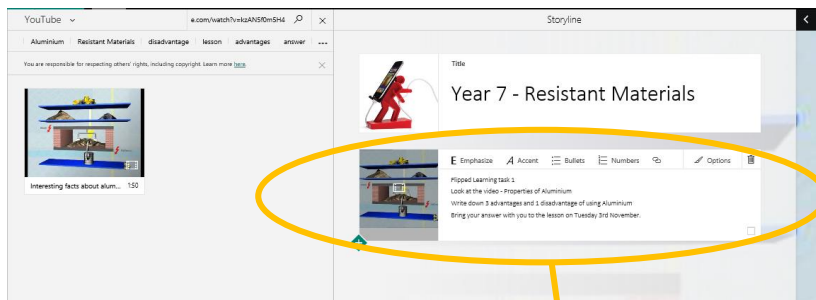
6) Paste the URL into the search box on the left of your screen.

You can also search for videos by topic.

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7) Your video should appear on the left hand side of your screen. Drag the video onto your story line. This will automatically add the video to your storyline.



8) You are now able to add a caption next to your video. Type in your flipped learning task here. Once you have done this click on the 'Preview' tab to preview your Sway.

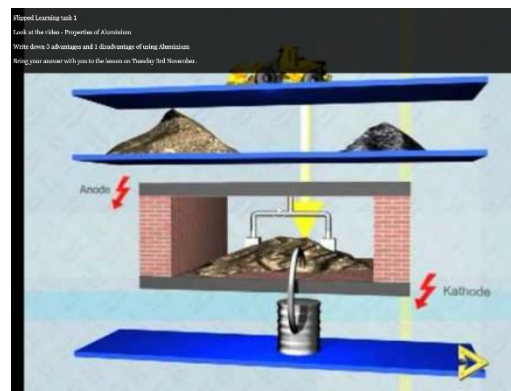
## Flipped learning Task 1

Look at the video - Properties of Aluminium

Write down 3 advantages and 1 disadvantage of using aluminium.

Bring your answers with you to the lesson on Tuesday 3rd November.

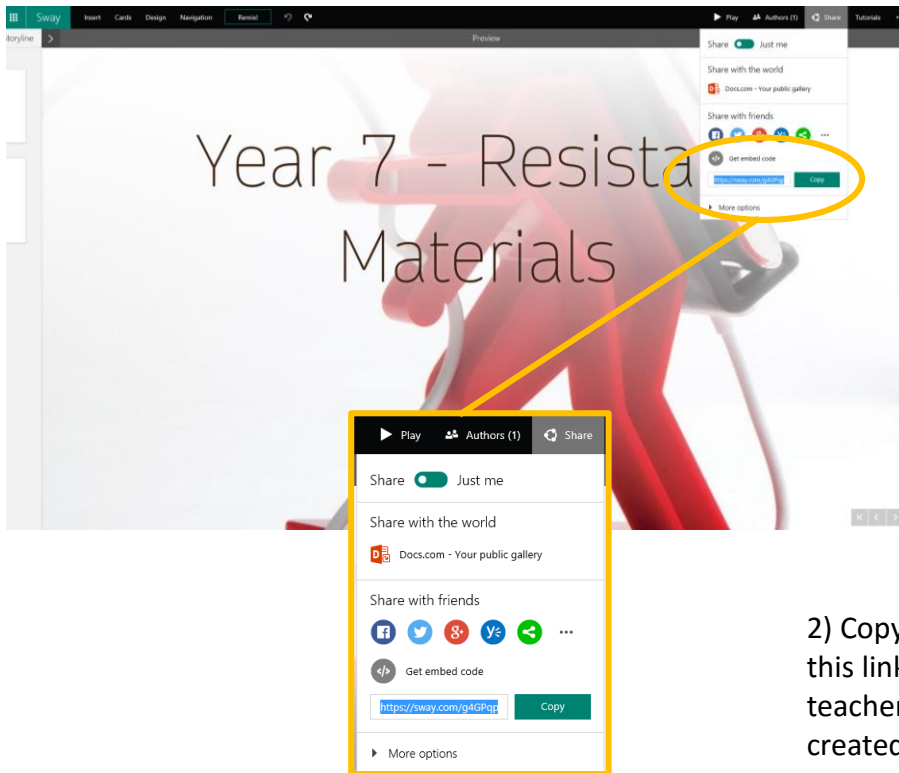
Preview



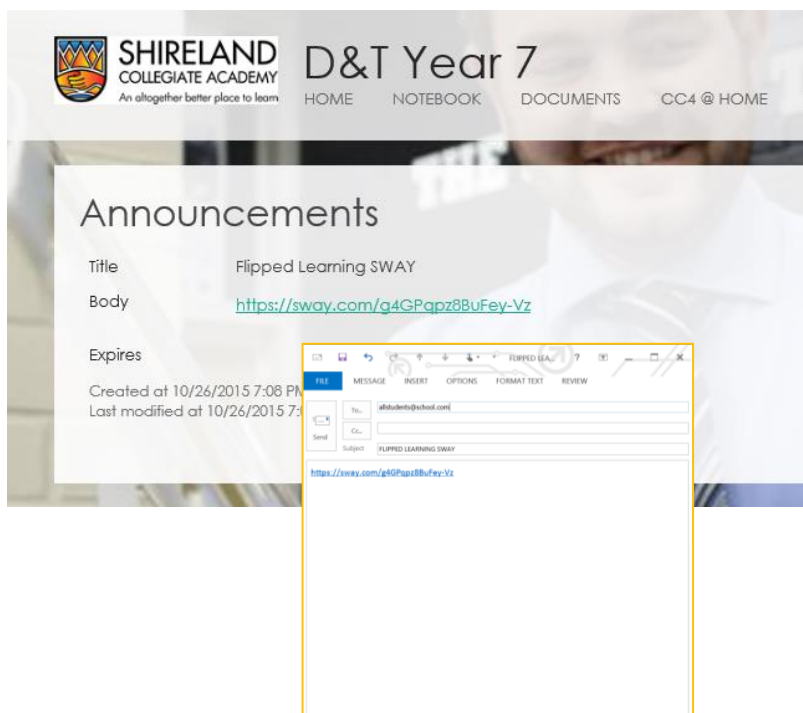
**You have now successfully added your video onto Sway!**

# Flipped Learning in Design and Technology

1) You can now share your Sway with your students and other teachers. Simply click on the 'share' icon on the top right of the page.



2) Copy the link. You can now send this link to your students and teachers to view the Sway you have created.



3) You are now able to paste this link onto the class site or send it via email to your audience.

# Flipped Learning in Design and Technology

## Tracking student progress in Excel

Once the students have completed their flipped learning task insert the task onto your tracking sheet. Create a column for completed. This will keep a note of all the students who have completed the task. Also create a Level column. This will allow you to give each individual a level for their flipped learning task.

Flipped learning tasks						
11/09/2015		18/09/2015		25/09/2015		
Health and safety in the workshop	CL	Hardwoods and Softwoods	CL	Properties of aluminium	CL	
Saakin	Y	Y	Y	Y		CL
Ommar	Y	Y	Y	Y		Emerging
Raza	Y	Y	Y	N		Developing
Jakaria	Y	Y	Y	Y		Proficient
Jozef	Y	Y	Y	Y		Advanced
Lina	Y	Y	Y	ABS		
Nikolaj	Y	Y	Y	Y		
Jedaiah	Y	Y	Y	Y		
Aude	Y	Y	Y	Y		
Haleem	Y	Y	Y	Y		
Pardeep	N	Y	Y	N		
Milana	Y	N	Y	Y		
Mizpah	Y	Y	Y	Y		
Aaminah	N	Y	Y	Y		
Touqeer	N	Y	Y	Y		
Ryan	Y	Y	Y	Y		
Shaquille	Y	ABS	Y	Y		
Daaud	Y	Y	Y	Y		
	Y	Y	Y	Y		

Copy the 'View Only' link from the share option. This will allow you to share the tracking sheet with the student but preventing them from editing it.



By doing this you will be able to track their process quickly and easily.



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Sharing your tracker with other teachers and students

Flipped Learning video

Always make sure that all videos are relevant to the topic you are teaching

ensure that the video is visually pleasing, accurate and easy to follow

speak clearly and remember to use the correct terminology

make sure that all uploaded videos are high definition.

Setting the task

set out clear guidelines

make sure that all information can be easily accessed by all students

make sure that all students have access to the resource

make sure all students know how to respond to the task.



# Flipped Learning in Design and Technology

## Sway in action

### Flipped learning with KS5 – Product Design

All classes have their own individual Sway.



Flipped learning tasks are always set out on Sway so students know exactly where to find the task and can also look back at existing tasks.

Students watch the video below on Product Analysis.



Once students have watched the video they are to carry out the task

Analysing products for development

**Look at the video 'Dyson - Product Analysis'**

Think of a product you have in your home that has developed over the last 10 years.

Analyse the product and sketch a developed version of the product.

You must give consideration to the following:

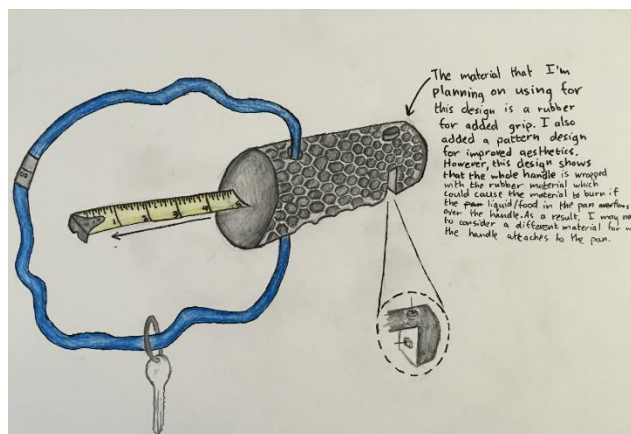
- Aesthetics
- Functionality
- Size



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## Flipped learning response

Students will bring their flipped learning response with them to class. The example below has been done on paper.



An initial guide to flipped learning can be found at:

<http://www.ocr.org.uk/about-us/what-we-do/supporting-learning-through-technology/flipped-learning/>

## Summary

Sway's facility to enable the sharing for design and technology learning resources saves teacher time, makes flipped learning more effective and raises attainment.