



Media Literacy Integration

Media Literacy & Science Education

Carol Arcus & Neil Andersen - The Association for Media Literacy aml.ca

Hello and welcome to Media Literacy & Science Education

My name is Neil Andersen. Carol Arcus and I teach the Media Studies Additional Qualifications course. We welcome you to join us the next time the course is offered.

We are going to discuss ways that media literacy might be integrated into AND ENHANCE science learning.

Media Literacy Integration

1. Teaching *Through* and *About* via *YouTube*

2. Inquiry and the Media Literacy Triangle

3. Media Production

This prez has 3 sections.

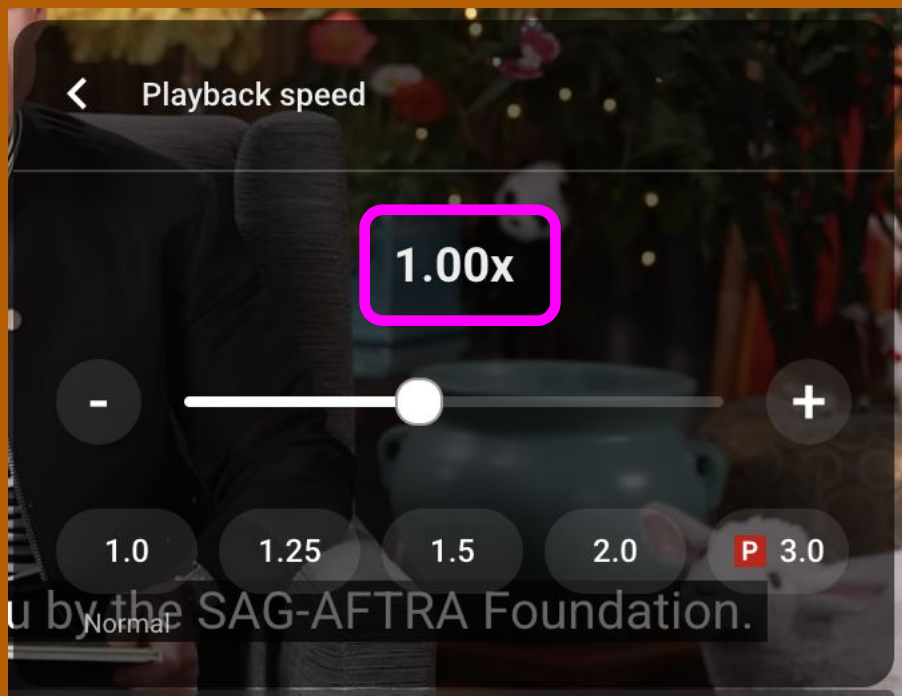
1. YouTube Controls

Speed and Translation

I am going to describe how teachers might use YouTube to help students understand science content and media literacy concepts simultaneously.

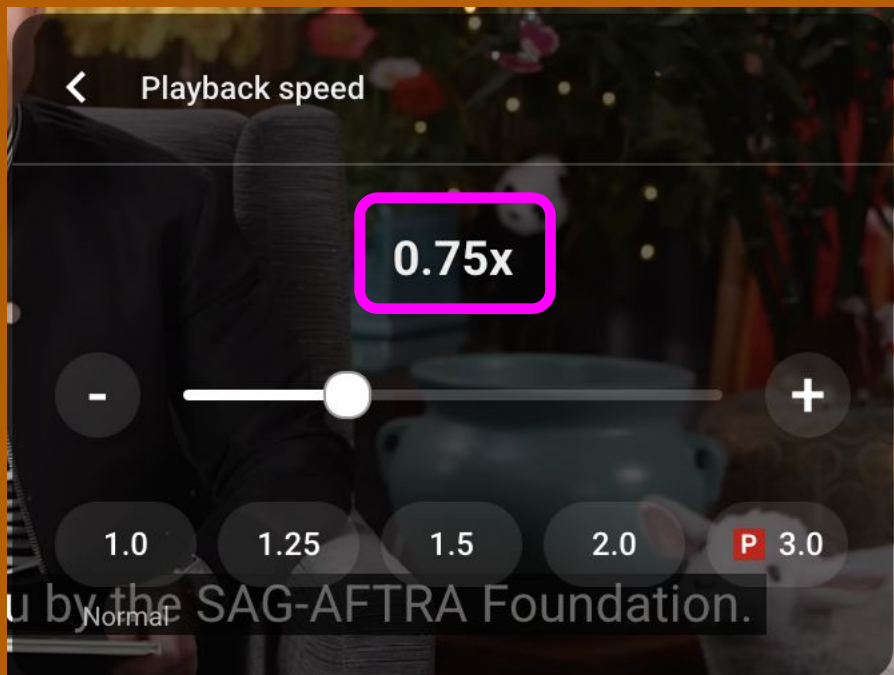


YouTube offers several controls that might serve valuable educational purposes.

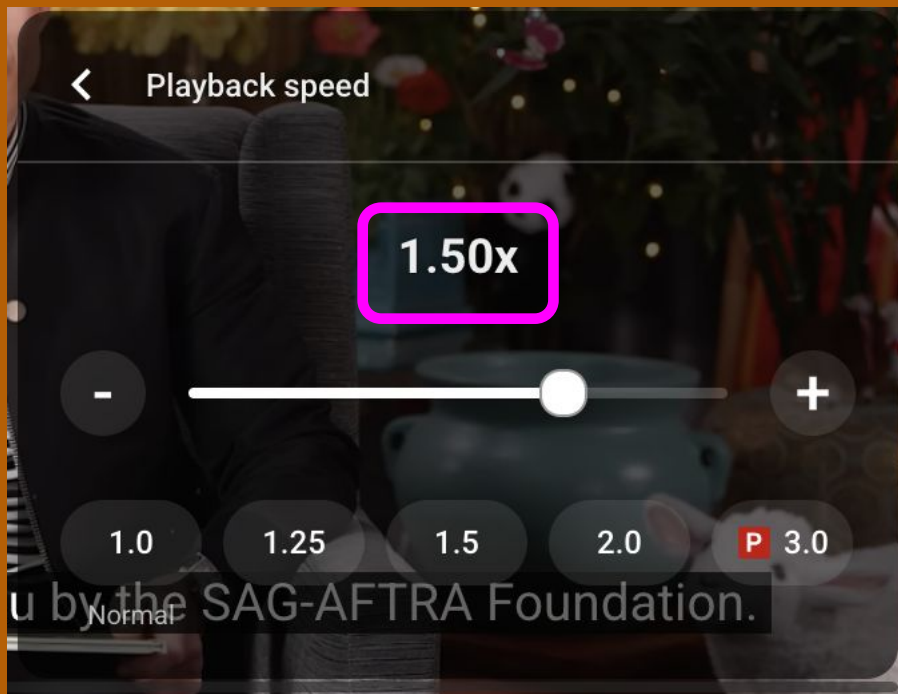


YouTube's speed control offers a useful example of the media literacy concept through and about, where we study both the content and the effects of media.

Through refers to the content of a video, i.e., science; about refers to the characteristics of the medium, in this case the speed of the playback. The 1.00x you see here directs YouTube to play a video at the same speed as it was recorded.



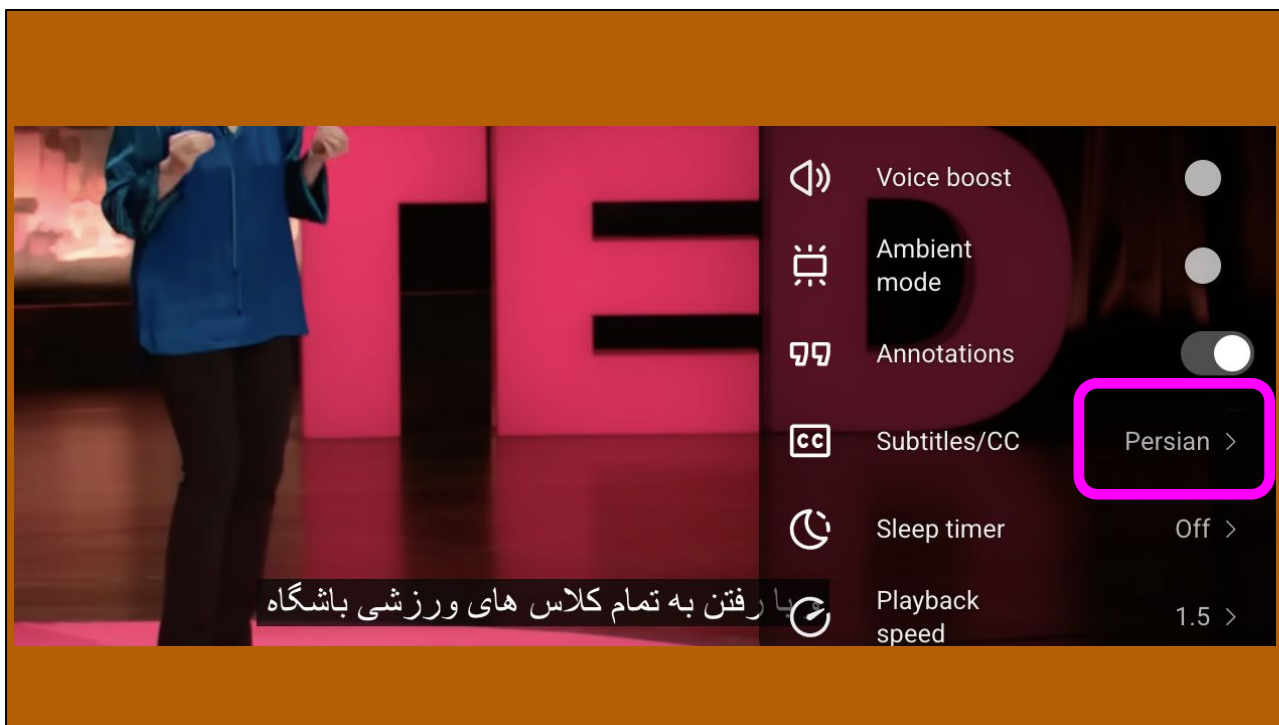
Playback speed can be adjusted up or down for different purposes. Teachers might use the 1.5 speed to preview a video before showing it. If a teacher has a large second-language cohort or the video has a large number of new or challenging words, a video can be shown at .75 speed to make it easier for students to capture words that might be spoken too quickly by a native English speaker.



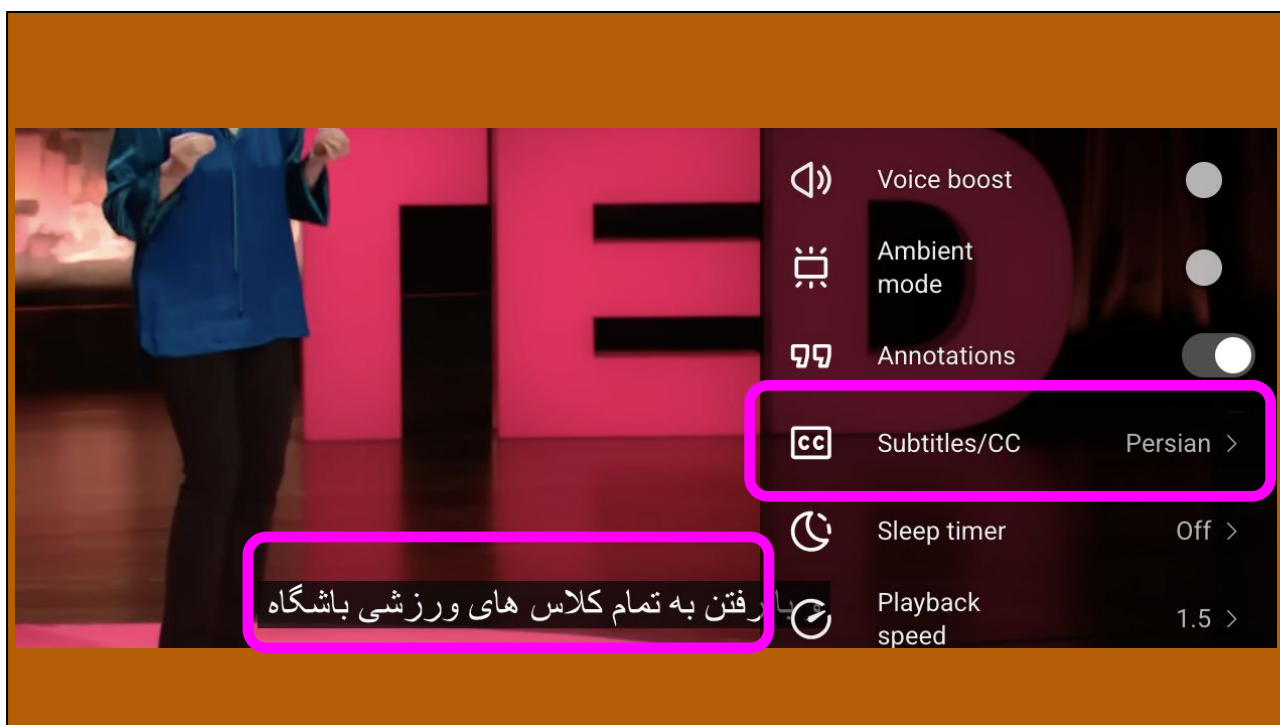
If there is long and ponderous narration and the class is mostly native English listeners, a video can be accelerated to 1.5 speed to match the thinking speed of most listeners.



YouTube can now produce real-time translated subtitles. That means that non-English speakers can read a real-time translation of a video. The translation feature can be activated in the subtitle control.



I have selected Persian here because I have many Persian-speaking students.



And here you see the Persian translation.

Transcript

Follow along using the transcript.

[Show transcript](#)

YouTube also offers transcripts of many videos.

Clicking the show transcript button reveals a transcript in most languages

The screenshot shows a video player interface with a dark-themed transcript panel. The panel is titled 'Transcript' and has a search bar at the top. Below the search bar, there is a list of transcript entries, each consisting of a timestamp and a line of Persian text. The timestamps are in a blue box, and the text is in white. The entries are as follows:

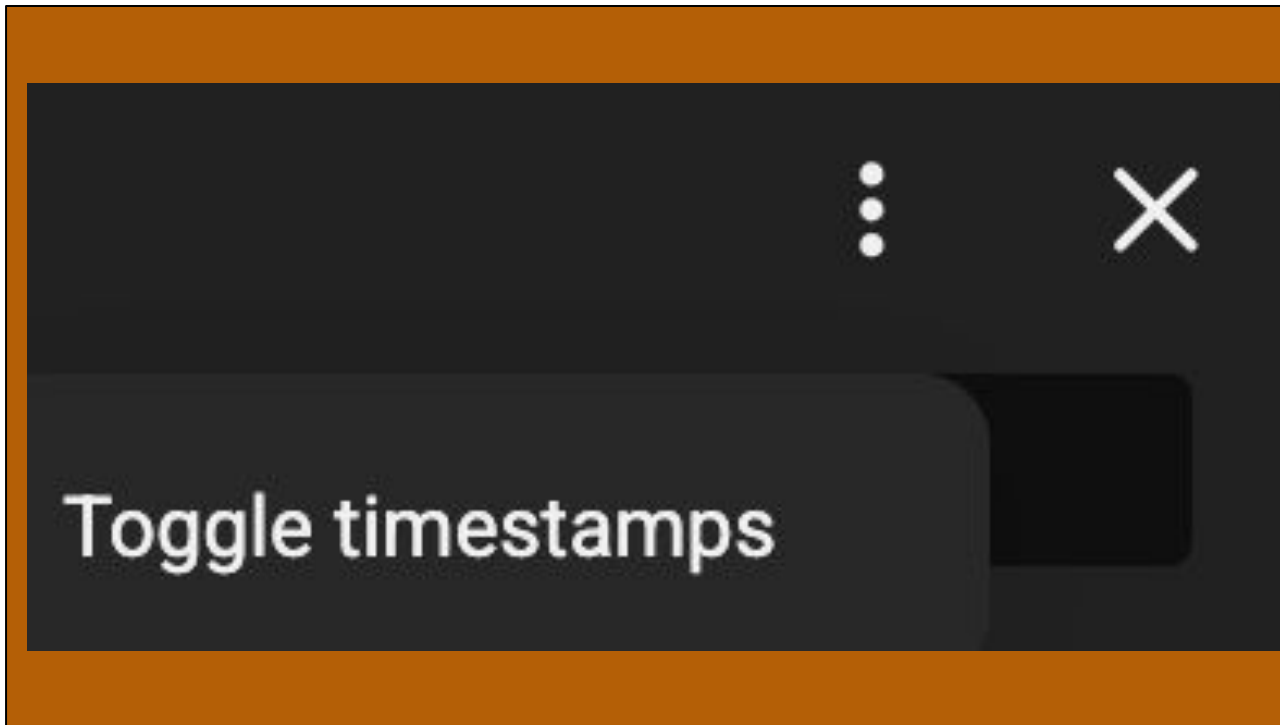
Timestamp	Text
4:06	"قایقرانی رودخانه داشته باشم"
4:07	و آن چیزی بود که باعث شد به باشگاه بروم
4:09	و با رفتن به تمام کلاس های ورزشی باشگاه
4:13	روی شخصیت درجه یک خودم تمرکز کنم
4:16	همه چیز را تجربه کردم
4:18	به کلاس های کیکبوکس، رقص، یوگا، و ایروبیگ رفتم
4:22	و در ابتدا خیلی سخت بودند
4:24	اما حالا هر که میخواد شروع کنه باید بدونه که بعد از ۳ تا ۴ ماه میتونه بدنش رو تغییر بده

At the bottom of the panel, there is a language selector showing 'Persian' with a dropdown arrow. On the left side of the image, the word 'Timestamps' is written in white, with two white arrows pointing to the timestamp and text columns of the transcript list.

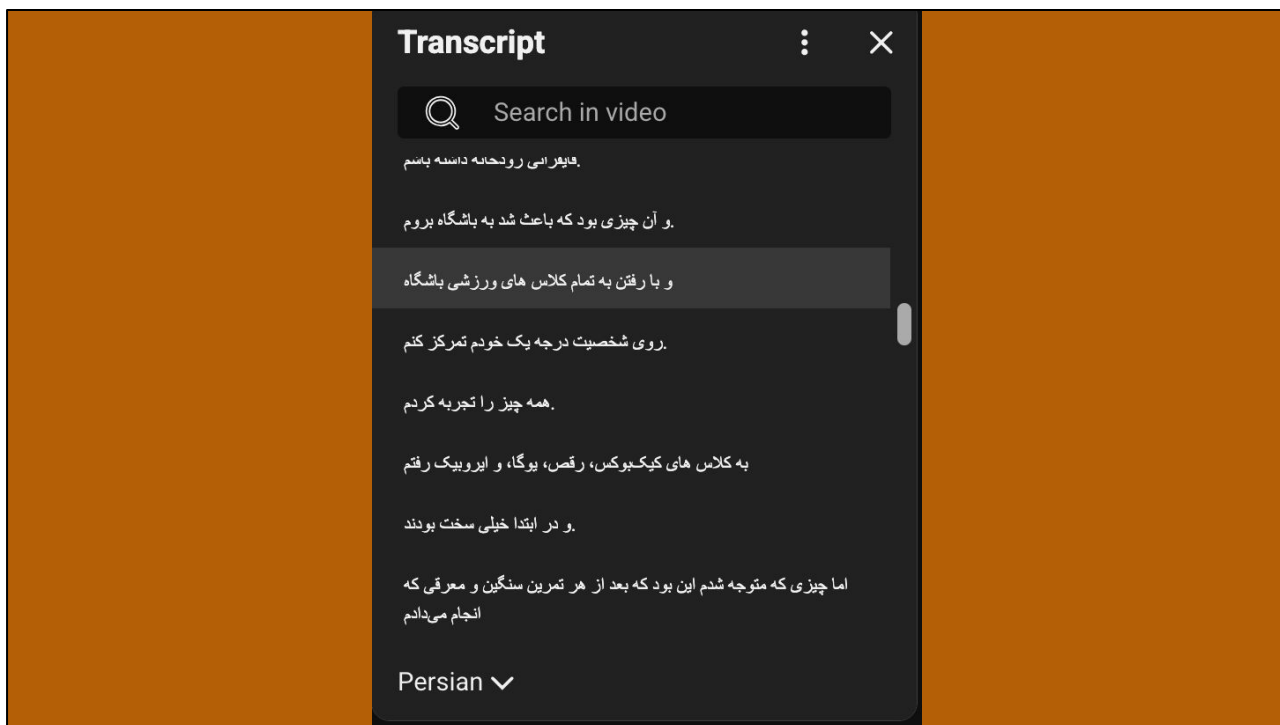
And here you see the Persian transcript.

This version shows the time stamps, which can be useful if they are being read as the video plays.

But maybe the student or teacher just wants the text without the time stamps.



If that is the case, students or teachers could toggle the timestamps under the 3 vertical dots.



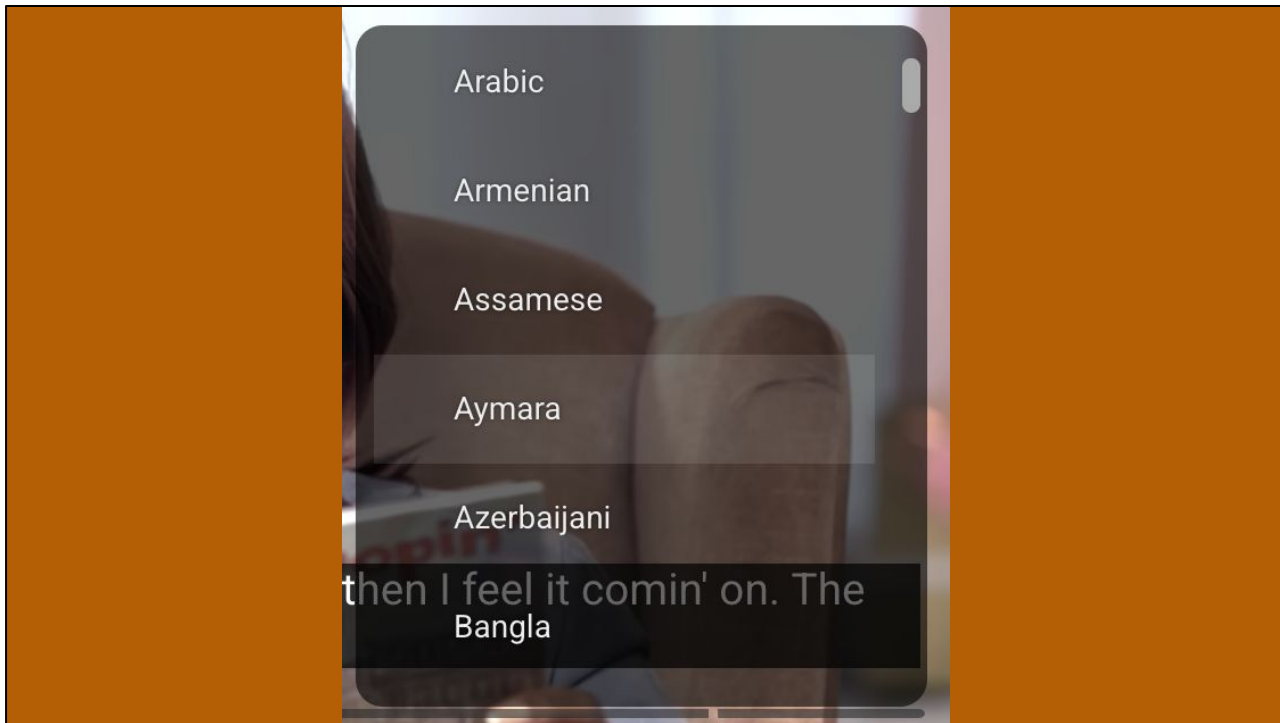
Without the timestamps, the transcript is a stream of text, in this case Persian.

Teachers or students might then copy the text and paste it where they need it.

Translator: Ehsan Memari Reviewer: Sadegh Zabihi

چه می‌شود اگر به شما بگویم چیزهایی هستند که الان می‌توانید با انجام آن‌ها
یک تاثیر مثبت و فوری روی مغزتان که
شامل حوصله و تمرکزتان می‌شود داشته باشید؟
و چه می‌شود اگر بگویم این تاثیرات مشابه می‌توانند درحقیقت برای مدتی
طولانی
باقی بمانند و مغز شما را از شرایط مختلف مثل
افسردگی، بیماری آلزایمر یا زوال عقل مراقبت کنند
انجامش می‌دهید؟
بله!

It can be sent to any screen or printed to paper for further processing.
Here I have copied and pasted the translation into a Google Doc.



Some teachers know these affordances; all of them should.
But is this a through or about phenomenon?

Through & About

**Facts
Concepts
Procedures**

**Environments
Codes &
conventions
Effects**

Because these affordances are content-agnostic (i.e., the content is irrelevant), this is an ABOUT phenomenon.

(Meaning that we are teaching about a tool or technology we are using to deliver content.

This way, we see & understand the whole picture.)

Teachers need to know when and how to use them AND to empower their students by telling them how to adjust settings and why. In fact, it could make a useful class inquiry to try several settings and find the one(s) that are best suited to the class's and/or individual's needs. This would also be a useful model of a media literacy inquiry.

That way, teachers are using ABOUT effectively while also helping their students understand its uses and impacts.

2. Inquiry

Let's consider how You Tube might provide opportunities for media literacy and Science inquiry.

Inquiry

Grade 4 A1. STEM Investigation and Communication Skills

**use a scientific research process,
a scientific experimentation process, and an
engineering design process to conduct
investigations, following appropriate health
and safety procedures**

Here is a science expectation statement that invites Inquiry.

This aligns closely with media literacy concepts.

Inquiry

Compare and contrast 2 YouTube videos.

Home Sweet Habitat: Crash Course Kids #21.1

[<https://www.youtube.com/watch?v=p15lrEuhYmo>]

Natural Habitats and Ecosystems

[<https://www.youtube.com/watch?v=1H1zqCvGcus>]

We have selected 2 videos that deal with habitats.

These two related but different videos encourage compare and contrast
- a powerful pedagogical tool for critical thinking.

We also use media inquiry to explore content but also *how* that content
is constructed.

This deepens understanding of meaning and purpose.



This is the first video:

Home Sweet Habitat

<https://www.youtube.com/watch?v=p15lrEuhYmo>

4 min, 41 sec

How would a polar bear do if you put it in the desert? Not well. But why? Why can't anything live anywhere? Well, this has to do with habitats and how animals (including humans) are suited for living in one place over another.



This is the second video.

Smile and Learn: Natural Habitats and Ecosystems

<https://www.youtube.com/watch?v=1H1zqCvGcus>

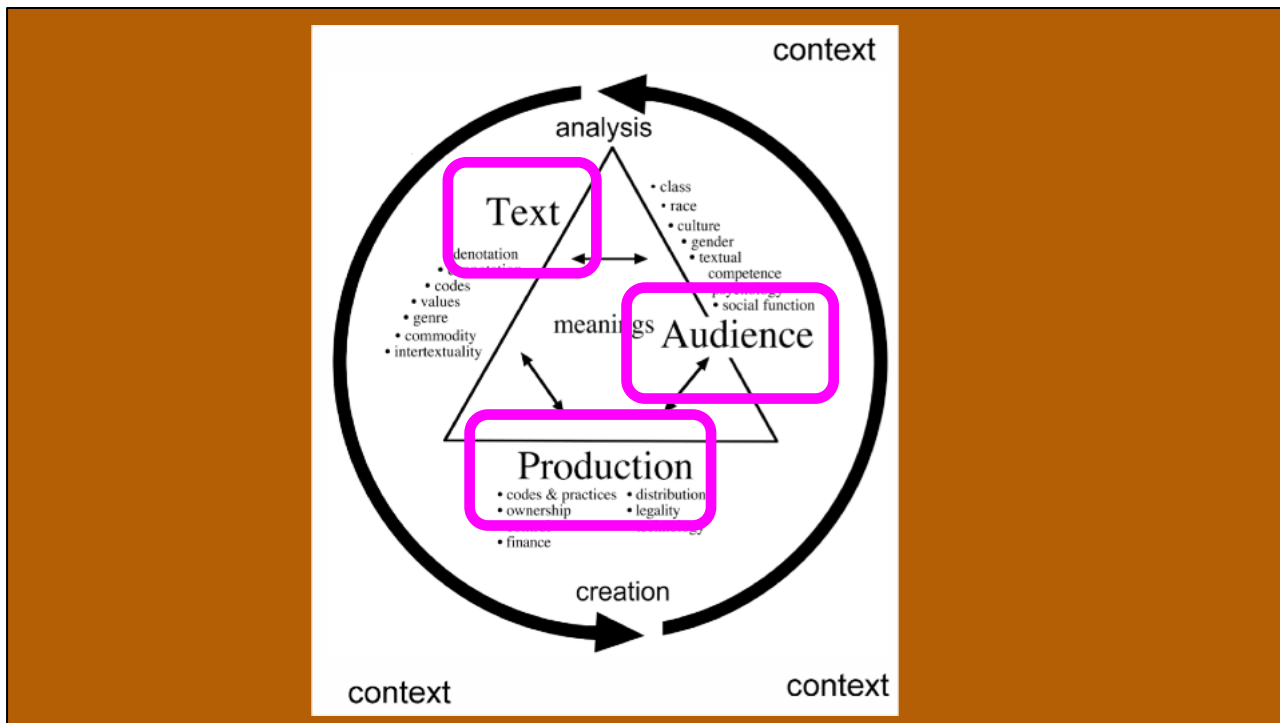
12 minutes

Educational video for children to learn about natural habitats and ecosystems. They will discover what a habitat is and will look at two types of habitats: terrestrial and aquatic.

Media Literacy Triangle

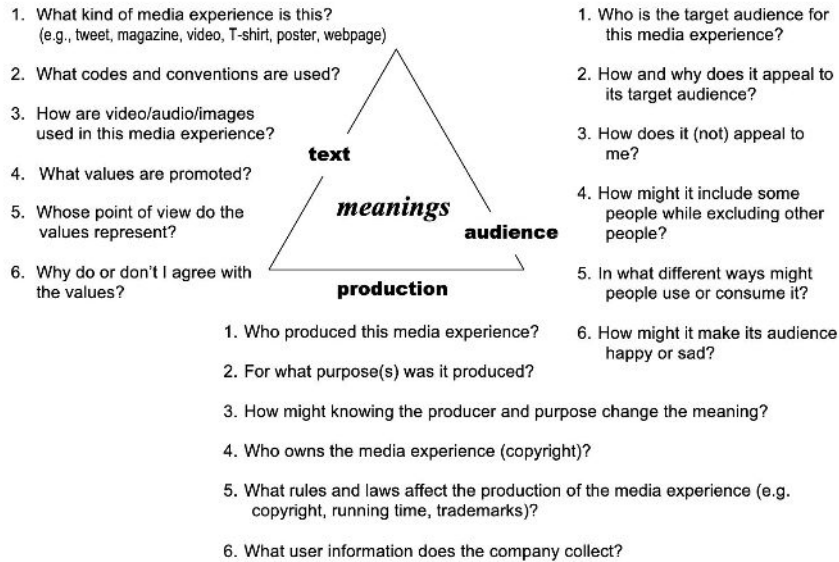
The Media Literacy Triangle is a critical thinking tool for unpacking content, purpose, and audience.

Think about it as a decoder ring.



The triangle offers 3 different perspectives: audience, production and text (“construction”).

Triangled Questions



aml.ca

There are several versions of the triangle on the aml.ca website.

This is the elementary version.

Teachers would choose just a few questions from each side.

Never all the questions.

Think about the videos you have just watched.

Scan the questions for relevance.

Audience

- 1. How and why does this text appeal to its target audience? [might forms of animation appeal to children?]**
- 2. How can I tell?**

The content usually corresponds to the prime target audience.

These triangle questions probe the audience appeal of these videos.

Q 2 asks students to give examples (deep viewing).

We encourage teachers to show videos twice, as the 2nd viewing surfaces critical thinking.

Text

1. What codes and conventions are used? [types of animation? Music? voice-over?]
2. Are there any stereotypes?

These explore the construction of a media experience.

These Text questions can fit these videos ("codes and conventions" are strategies that construct theme and effect.)

Q 2:

Might there be animal stereotypes?

Sometimes stereotypes are unintentional; sometimes they are used for effect.

Students need to learn the difference.

Production

- 1. For what purpose(s) was this text produced? [Education or entertainment, or both?]**
- 2. What production techniques were used to produce this text [how might that affect the message?]?**

These set of Qs consider how, why and by whom a media experience was created.

For example, students need to recognize the difference between a corporate, profit-driven message, and a not-for-profit one - for example, a purely educational text..

Inquiry

This Triangle/compare-contrast inquiry teaches *Through* Media (using the medium of Youtube).

It teaches *About* Media - applying text, audience, production questions.

It asks **what** the video says and **how & why** it says it, & **to whom**.

*

Deeper Learning results, as learners:

- Engage with subject content.
- Compare and question different perspectives.
- Understand how and why messages are constructed.

Thus building deeper, more critical subject knowledge.

3. Production

Creating media is an essential part of understanding media as well as consolidating science learning.

Production

A1.5 communicate their findings, using science and technology vocabulary and formats that are appropriate for specific audiences and purposes

Media production is addressed in expectation A1.5

Production 1

Imagine a homes-and-habitat **DOCUMENTARY** video you might create about your local community.

Create a storyboard that describes some animals that you might include.

Imagine how you might represent their food, water, shelter and space. (e.g., still photos, live video, animated video).

Here is one possible production project.

Please note that it refers to plans for a video but NOT a video.

A storyboard is a perfectly acceptable production task.

Production 2

Imagine a homes-and-habitat ROLE-PLAY video you might create about your local community.

Create a storyboard that describes an INTERVIEW with a local animal.

Imagine how you might represent their food, water, shelter and space. (still photos, live video, animated video, green screen).

What speech and actions might the actor portraying the animal use?

Here is a second possible production project.
It is similar but could be more personal and fun.

Assessment

- Keep it FUN! — especially at the beginning of the year.
- Diagnostic assessment: observe students' media literacy awareness and skills for future planning

Assessment might be conducted while the students are creating.



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<https://aml.ca/>

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