

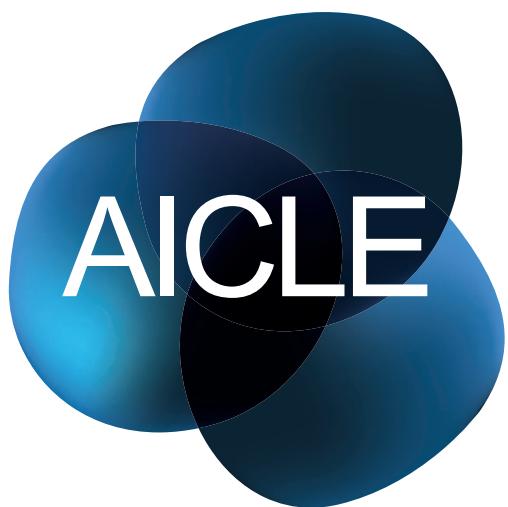


Technologías

Secundaria



JUNTA DE ANDALUCÍA



Identificación del material AICLE

TÍTULO	Materials and Plastics
NIVEL LINGÜÍSTICO SEGÚN MCER	A2.1
IDIOMA	Inglés
ÁREA / MATERIA	Tecnologías
NÚCLEO TEMÁTICO	Materiales textiles y plásticos
GUIÓN TEMÁTICO	Serie de actividades para trabajar los contenidos de: materiales plásticos y sus propiedades materiales textiles y sus propiedades 1 proyecto individual.
FORMATO	Material didáctico en formato PDF
CORRESPONDENCIA CURRICULAR	3º de Educación Secundaria
AUTORÍA	Anastasio Pineda Benítez
TEMPORALIZACIÓN APROXIMADA	6 a 8 sesiones
COMPETENCIAS BÁSICAS	<p>Conocimiento del Medio Físico:</p> <ul style="list-style-type: none"> - Cuando trabajamos el conocimiento de los materiales de uso técnico. Es fundamental la relación de éstos con los medios de producción y con sus efectos sobre el medio ambiente. <p>Aprender a aprender:</p> <ul style="list-style-type: none"> - Utilizar el método de proyectos como estrategia para desarrollar la capacidad de aprender por sí mismos. Discriminando la información importante de la suprensible - Utilizar recursos tecnológicos para llegar a un objetivo concreto - Mantener una actitud positiva, de colaboración y respeto a las aportaciones de los demás <p>Competencia lingüística:</p> <ul style="list-style-type: none"> - Conocer y utilizar el vocabulario básico de la unidad - Comprender y expresar hechos de forma oral y escrita relacionados con el tema <p>Tratamiento de la información y competencia digital:</p> <ul style="list-style-type: none"> - Uso de las TIC como apoyo a la realización del proyecto (Planos, elaboración de la memoria, PPP, Búsqueda de información en internet...) <p>Autonomía e iniciativa personal:</p> <ul style="list-style-type: none"> - Trabajar proyectos, imaginar, diseñar, trabajo en grupo llegando a consenso... - Valorar la importancia de la aplicación de la Tecnología en la sociedad
OBSERVACIONES	En la ficha del profesor están solucionadas las actividades que no son de respuesta abierta u obvia.

Tabla de programación AICLE

OBJETIVOS	<p>1. Abordar con autonomía y creatividad, individualmente y en grupo, problemas tecnológicos trabajando de forma ordenada y metódica para estudiar el problema, recopilar y seleccionar información procedente de distintas fuentes, elaborar la documentación pertinente, concebir, diseñar, planificar y construir objetos o sistemas que resuelvan el problema estudiado y evaluar su idoneidad desde distintos puntos de vista.</p> <p>2. Disponer de destrezas técnicas y conocimientos suficientes para el análisis, intervención, diseño, elaboración y manipulación de forma segura y precisa de materiales, objetos y sistemas tecnológicos.</p> <p>8. Actuar de forma dialogante, flexible y responsable en el trabajo en equipo, en la búsqueda de soluciones, en la toma de decisiones y en la ejecución de las tareas recomendadas con actitud de respeto, cooperación, tolerancia y solidaridad.</p>																																							
CONTENIDOS DE CURSO / CICLO	Bloque III: Material es de uso técnico.																																							
TEMA	<ul style="list-style-type: none"> - Plásticos, propiedades y clasificación - M. Textiles 																																							
MODELOS DISCURSIVOS	<ul style="list-style-type: none"> - Aplicar métodos de proyectos - Exponer oralmente trabajos - Dar opiniones razonadas 																																							
TAREAS	<ul style="list-style-type: none"> - Collage de diversos materiales - Murales - Presentaciones power point 																																							
CONTENIDOS LINGÜÍSTICOS	<p>ESTRUCTURAS:</p> <p>It is more... than...</p> <p>It is... - er... than</p> <p>It is the most...</p> <p>It is made of...</p> <p>It is used for + gerund</p> <p>It is used to + infinitive</p> <p>I use it to + infinitive</p> <p>This is made of...</p> <p>Regarding the ...</p> <p>Concerning the...</p> <p>As far as the ___ is concerned...</p> <p>LÉXICO:</p> <table border="0"> <tr> <td>big wheel</td> <td>kennel</td> <td>stability</td> </tr> <tr> <td>bones</td> <td>light</td> <td>steal</td> </tr> <tr> <td>builders</td> <td>design</td> <td>structure</td> </tr> <tr> <td>center of</td> <td>mass</td> <td>tip over</td> </tr> <tr> <td>gravity</td> <td>structure</td> <td>tonnes</td> </tr> <tr> <td>crane</td> <td>mass</td> <td>traction</td> </tr> <tr> <td>deform</td> <td>structures</td> <td>triangular</td> </tr> <tr> <td>effects</td> <td>plastic</td> <td>structures</td> </tr> <tr> <td>fabric</td> <td>plasticine</td> <td>vaulted</td> </tr> <tr> <td>structure</td> <td>pneumatic</td> <td>structures</td> </tr> <tr> <td>fell down</td> <td>structures</td> <td>wood</td> </tr> <tr> <td>hanging</td> <td>rubber</td> <td></td> </tr> <tr> <td>structures</td> <td>squares</td> <td></td> </tr> </table>	big wheel	kennel	stability	bones	light	steal	builders	design	structure	center of	mass	tip over	gravity	structure	tonnes	crane	mass	traction	deform	structures	triangular	effects	plastic	structures	fabric	plasticine	vaulted	structure	pneumatic	structures	fell down	structures	wood	hanging	rubber		structures	squares	
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CRITERIOS DE EVALUACIÓN	<p>1. Valorar las necesidades del proceso tecnológico empleando la resolución técnica de problemas analizando su contexto, proponiendo soluciones alternativas y desarrollando la más adecuada. Elaborar documentos técnicos empleando recursos verbales y gráficos.</p> <p>2. Realizar las operaciones técnicas previstas en un plan de trabajo utilizando los recursos materiales y organizativos con criterios de economía, seguridad y respeto al medio ambiente y valorando las condiciones del entorno de trabajo.</p> <p>4. Describir propiedades básicas de materiales técnicos y sus variedades comerciales: madera, metales, materiales plásticos, cerámicos y pétreos. Identificarlos en aplicaciones comunes y emplear técnicas básicas de conformación, unión y acabado.</p> <p>10. Acceder a Internet para la utilización de servicios básicos: navegación para la localización de información, correo electrónico, comunicación intergrupal y publicación de información.</p>																																							

Plastics

Let's listen to a song!

'Barbie Girl' by Aqua

Listen to the song and put these phrases in order

Life In Plastic, It's Fantastic

Imagination, Life Is Your Creation

- Sure, Ken!

Dress Me Up, Take Your Time, I'm Your Dolly

You Can Touch, You Can Play

- Oh, I'm Having So Much Fun!

Lets sing the song

Reading Activity

Look around, you can probably see a lot of objects that are made of plastic: pens, glasses, backpacks, buttons...

Today, plastic materials are just as important as wood or metal materials. Plastics are essential for several industrial processes: packaging, telecommunications, transportation, construction...

Can you imagine our life without plastics? Without cars, houses, roads, a class... It's really difficult to imagine!

There are two kinds of plastic materials: synthetics and naturals. Naturals are obtained directly from raw materials (e.g. latex, cellophane casein), we get synthetics from processed materials (oil, natural gas or coal)

Nowadays, we have a big problem with plastics and how it effects the environment. Everyday a lot of plastic objects are produced and a lot are thrown away

Recycle, Reduce, Reuse, these are the 3 "R" to help stop the destruction of the environment.

Find the names of the following objects in the text.



Then, reuse them in the following sentences:

- I can't see very well so I wear a pair of _____
- This logo is for friends of _____ we love plants and animals.
- My _____ is empty. I'll help you to carry your books.
- At the beginning trains ran on _____ but they gave off a lot of fumes
- _____ industries wrap things.
- _____ is like transparent paper

Vocabulary Activity.



Underline the words you don't understand. Compare your answers to a partner's.

Match the sentences with the correct paragraph.

1. Tipos de plásticos y materias de las que se obtienen.
2. Forma de mitigar los efectos perversos de los plásticos en la naturaleza
3. Importancia de los plásticos y productos producidos con ellos.

In pairs, fill in the table using the following sentences. Follow the example.



Properties of Plastics	Characteristics	Utilities
Mechanical	Good malleability	We can make thread with plastics.
Acoustic	Good ductility	To make screens, windows, doors, etc
Electrical		
Thermal		
Others		

bad conductivity

We use plastic to wrap certain objects such as bread

A lot of plastics are reusable

bad conductivity

bad conductivity

Listening Activity



Listen to the text

Find the main idea of the text. Summarize it in one sentence

- This text is about a _____ who is _____ about _____

Read the following questions about the text:

1. What is Carol worried about?
2. Where does Carol learn that the world is in danger?
3. What is one thing that Carol does to look after the environment.
4. When does John think that he'll change his mind?

Let's listen again and fill in the blank spaces:

John: And today's question is, "Do you worry about the _____? So Carol, do you worry about the environment?"

Carol: Of course.

John: Don't lie to me.

Carol: _____...no, I didn't care about the _____.

John: So what changed?

Carol: Well, I actually went to _____ and we learned about how the world is in danger right now and how big of a _____ it really is! So now I carry my own eco-bag when I go grocery shopping

John: That's _____, that's wonderful.

Carol: Do you use eco-bags too?

John: No...no...I love those _____. They make such a great noise when you...you know Shashashasha...OK...never mind.

Carol: But John, you need to think about the environment.

John: I know, I know,...it comes up in a lot of _____, no? The environment...So maybe by the end of graduation, college will _____ my mind. Until then...

Carol: Until then, he won't care about the environment

Let's listening again

Now, you can answer the questions above?

Write three true sentences about the recording.

e.g.

Carol is worried about the environment.

Classifying Plastics

**Work in pairs and use the internet
to help you fill in the table below.**



Kind	Characteristics	Name (Principals)	Application
Thermoplastics			
		<ul style="list-style-type: none">• Polyurethane• Bakelite• Melamine	
			<ul style="list-style-type: none">-Thermal and electrical insulation, mattress, condoms, gloves...-tires, gloves, hoses, pipes...- Immersion suits, hoses, gloves...

Compare your answers with other pairs



- The main characteristic of _____ is _____
- Some examples of _____ are _____
- You use _____ to isolate

In pairs, prepare a power point presentation or Impress presentation (PPP) to explain this table.

Power point requirements:

- Between 5 to 10 slides
- You can only use text and images
- You must present it in about 5 minutes.

Present your power point to the class.

Conformation Techniques.

Make a mural with examples of the following processes and explain them to the rest of the class. Use the internet to help you find information.

Extrusion, vacuum forming, molding

Textile Materials

Think



Look at the following pictures. Then, look at the different labels and match each picture with the correct label.



Look at the labels

40% cotton
20% polyester
40% lycra

20% wool
80% cotton

100% new wool

100% acrylic

50% cotton
50% acrylic

100% silk

60% viscous
20 % cotton
20 % acrylic

a) Match the following words with the labels above.
T-Shirt, scarf, blanket, tie, pullover, skirt, legging, sheet



- I think a **sheet** is _____
- I think that the **pullover** is _____
- The **tie** _____

b) Why do you think cotton is the most commonly used textile material?
Use the following words and write sentences like the one in the example



- Cotton is more ecological than acrylic.

Ecological
cheap
soft
allergic
easy to wash
easy to iron
warm

There are three kinds of natural textile fibers and several synthetic textile fibers. Make a table with examples of fibers, characteristics and uses.



Example: cotton-ecological-clothes

Make a collage using different kinds of materials.



Project Activity



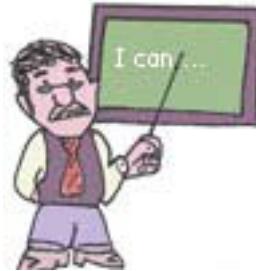
1. Using the project methods design, use plastic and recycled textile materials to make an original cap.

2. Once you have finished your project, all of the members of the group will have to evaluate your work using the following chart:

Step	Comments	Improvements for next time
Chosen solution		
Design		
Planning		
Building		

3. When you finish your projects, present them to the rest of the class.

Self-assessment chart



I can

Can understand a technological text	YES NO NOT YET
Know and put into practice the project method	YES NO NOT YET
Know different types of plastic materials and their properties	YES NO NOT YET
Can identify some textiles	YES NO NOT YET
Build a simple technological project	YES NO NOT YET
Take notes from a listening.	YES NO NOT YET
Explain my project to the class in English	YES NO NOT YET
Know the meaning of the new words from this unit	YES NO NOT YET

PLASTIC

- Key -

Listening Activity

Environment, before, environment, university, problem,
wonderful, plastic, bags, classes, change

Kind	Characteristics	Name (Principals)	Aplications
	Softens when heated Easily recyclable	- PVC - Polystyrene - Polyethylene - Methacrylate - Teflon	Pipes, Packaging Containers Glass objects
Thermostable	Only can be heated once		Foam Mattress Object's handle isolates
Elastomer	Adhesion, hardness and highly elastic	- Rubber - Neoprene	

