

1-2-3 mål i forløbet Inventions

Fag: engelsk

Stofområde: Inventions

Varighed: 12 lektioner a 45 minutter

Læringsmål

1. at søge information om valgt opfindelse
2. at øge og arbejde med ordforråd
3. at udarbejde en factbook på engelsk og præsentere den for andre

Niveau	Mestringsmål	Kommunikative mål
3 Skabe Vurdere	<ol style="list-style-type: none"> 1. Jeg kan søge information om min valgte opfindelse og reflektere over opfindelsens brugbarhed og relevans i verden. 2. Jeg kan udvælge og arbejde med ti ord, som jeg ikke kendte i forvejen, og anvende dem i min factbook. 3. Jeg kan med mine egne ord beskrive, vurdere og reflektere over min valgte opfindelse. 	<ol style="list-style-type: none"> 3a. Jeg producerer en factbook med fotos og tekst, hvor jeg beskriver, vurderer og reflekterer over min valgte opfindelses funktion og baggrund. 3b. Jeg præsenterer min factbook på engelsk for andre.
2 Analysere Anvende	<ol style="list-style-type: none"> 1. Jeg kan søge og anvende information om min valgte opfindelse og besvare de tilhørende arbejdsspørgsmål. 2. Jeg kan finde og arbejde med ti ord, som jeg ikke kendte i forvejen, og anvende dem i min factbook. 3. Jeg kan med mine egne ord beskrive og forklare om min valgte opfindelse. 	<ol style="list-style-type: none"> 3a. Jeg udvælger og organiserer en factbook med fotos og tekst, hvor jeg beskriver og illustrerer min valgte opfindelses funktion og baggrund. 3b. Jeg præsenterer/læser højt af min factbook på engelsk for andre.
1 Forstå Huske	<ol style="list-style-type: none"> 1. Jeg kan søge information om min valgte opfindelse og besvare de tilhørende arbejdsspørgsmål. 2. Jeg kan finde og arbejde med ti ord, som jeg ikke kendte i forvejen, og bruge dem i min factbook. 3. Jeg kan med mine egne ord beskrive min valgte opfindelse. 	<ol style="list-style-type: none"> 3a. Jeg fremstiller en factbook med fotos og ord/sætninger, hvor jeg beskriver min valgte opfindelses funktion. 3b. Jeg præsenterer/læser højt fra min factbook på engelsk for andre.

Forløbsplan

For at sikre, at forløbet ikke skrider, kan det med fordel planlægges bagfra.

Lektion	Indhold	Materialer
Den indledende fase		
1	<p>Opstart af forløbet Lav et slide med ordet "Inventions", eller skriv ordet på tavlen, og lad eleverne slå det op i ordbogen.</p> <p>Opgave 1 Historical Inventions Træning i at researche. Se facit under Undervisningsmaterialer.</p> <p>Cool-down: Afslut lektionen med en kort evaluering, der sætter fokus på dagens arbejde. Vælg den, du synes, passer bedst til dagens indhold eller til din klasse. Du kan benytte den samme flere gange, så klassen bliver fortrolig med den, og/eller variere dem.</p>	<p>Bilag 1: Historical Inventions</p> <p>Bilag 2: Cool-downs</p>
2	<p>Forberedelse: Læreren laver på forhånd et slide med foto og navn på den opfindelse, klassen skal søge information om.</p> <p>Opgave 2 Research Task</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	<p>Bilag 2: Cool-downs</p>
3	<p>Opgave 3 Video Task – Watch and Discuss 10 Inventions to make your life easier</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	<p>Bilag 3: Video Task – Watch and Discuss Bilag 2: Cool-downs</p>
4	<p>Opgave 4 Find the Radar Klæd eleverne på til at lære at søge på nettet med denne sjove og udfordrende opgave.</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	<p>Bilag 4: Find the Radar</p> <p>Bilag 2: Cool-downs</p>

Den selvstændige fase		
5	<p>Forberedelse: Læreren har niveaudelt eleverne på forhånd.</p> <p>Opgave 5 Præsenter klassen for 1-2-3 målene og de 3 Task Levels. Inddeling af klassen i de tre niveauer.</p> <p>Opgave 6 Præsenter klassen for Word List Task.</p> <p>Opgave 7 Præsenter klassen for differentieret note-dokument "Notes for research".</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	<p>Bilag 5, 6 + 7: Level Tasks</p> <p>Bilag 8.1 + 8.2: Word List Task</p> <p>Bilag 9.1, 9.2 + 9.3: Notes for Research</p> <p>Bilag 2: Cool-downs</p>
6	<p>Evt. warm-up.</p> <p>Research og produktarbejdelse med vejledning. Husk Word List Task.</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	<p>Bilag 10: Warm-up Tasks</p> <p>Bilag 2: Cool-downs</p>
7	<p>Evt. warm-up.</p> <p>Opgave 8 Præsenter klassen for Factbook Check List.</p> <p>Research og produktarbejdelse med vejledning. Husk Word List Task.</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	<p>Bilag 11: Warm-up Tasks</p> <p>Bilag 12: Factbook Check List</p> <p>Bilag 2: Cool-downs</p>
8	<p>Evt. Warm-up.</p> <p>Research og produktarbejdelse med vejledning. Husk Word List Task.</p> <p>Ekstraopgave: Elever, der bliver færdige, og som har lavet et produkt, læreren kan godkende, kan arbejde videre med "Extra Task".</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	<p>Bilag 13: Extra Task</p> <p>Bilag 2: Cool-downs</p>

9	<p>Lærerforberedelse: Hav en lille engelsk tekst klar til oplæsning.</p> <p>Opgave 9 Oplæsningstræning</p> <p>Research og produktudarbejdelse med vejledning. Husk Word List Task.</p> <p>Tidsrammen kan udvides efter behov.</p> <p>Cool-down: kort evaluering af dagens lektion.</p>	Bilag 2: Cool-downs
Den evaluerende fase		
10 + 11	<p>Forberedelse: Slå det gerne stort op på ugeplanen eller i klassen, at der i dagens lektioner er "World Factbook Premiere".</p> <p>Opgave 10 Præsentation af factbooks</p> <p>Aflevering af Factbook + Word List Task.</p>	
12	<p>Evaluering</p> <p>Vis, og forklar evalueringsarket for klassen. Først udfylder eleven det, og herefter udfylder læreren det.</p>	Bilag 14.1 + 14.2: Evaluation Inventions

Tidsrammen kan udvides eller reduceres efter behov.

Historical Inventions

BILAG 1

Research on the internet and try to find out the date of these inventions:

	The Historical Invention	What year was it invented?
1	The Internet	
2	The Light bulb	
3	The Telephone	
4	The Refrigerator	
5	Braille	
6	The Termometer	
7	The Microscope	
8	Printing	
9	Paper	
10	The Wheel	

Cool-downs

BILAG 2

Cool-downs er korte evalueringer af dagens lektioner i den indledende og selvstændige fase af forløbet.

Kortene kan printes ud og uddeles eller vises på boardet. Evalueringen kan foregå alene, parvis eller i grupper. Se andre eksempler på cool-downs under de andre to forløb.

The Road to Success

1. Where am I going?
2. What is my next step?
3. Where am I now?

The Barometer

I worked hard and gave it all I got.

I worked really good today.

I did some good work today.

I worked well, but didn't finish.

I did a little work today.

No work today, I didn't start.



The Five Fingers

Show your fingers:

1. I don't understand the task.
2. I need to have the task explained again.
3. I think I understand but I'm not quite sure.
4. I understand the task.
5. I understand the task and can explain it to others.



Video Task – Watch and Discuss

BILAG 2

1. Watch the video:  if needed, watch it twice

2. What do you remember about each invention? Write notes in the grid below:

Garage Lights	
Anti-drip mug	
Coffee-mug phone charger	
Solar-powered phone charger	
USB-batteries	
Internal fridge magnets	
Jiba the robot	
Foot Handle	
Smart eyeglasses	
Purifying straw	

3. Discussion (in pairs or groups)

Imagine you have €100,000 that you are going to invest in one of the above products. Which one should you choose?

To help you select the product for investment, discuss the questions below for each of the 10 inventions:

- Will people use it?
- Will they use it for a long time or a short period?
- Is it expensive to make?
- Is it good for the environment?

Find the Radar (Søgetræning på Wikipedia)

BILAG 4

En søgeopgave, hvor klassen i fællesskab og hurtigst muligt skal komme fra Wikipedia-siden om The Refrigerator <https://en.wikipedia.org/wiki/Refrigerator> til siden om Radar <https://en.wikipedia.org/wiki/Radar>

Ved udelukkende at benytte de blå links, skal eleverne klikke sig frem og gå fra startsiden til slutsiden.

Læreren faciliterer legen på boardet. Klassen skal tælle og gemme, hvor mange klik, de bruger. Undervejs og især bagefter drøftes det i klassen, hvilke overvejelser der blev gjort for at finde frem til målet.

FACIT: Opgaven kan klares med fire klik:

Start:

<https://en.wikipedia.org/wiki/Refrigerator>
https://en.wikipedia.org/wiki/Home_appliance
https://en.wikipedia.org/wiki/Small_appliance
https://en.wikipedia.org/wiki/Microwave_oven
<https://en.wikipedia.org/wiki/Radar>

Nu skal eleverne selv prøve opgaven i par/grupper.

Flere par/grupper får samme opgave, da de bagefter skal sammenligne deres erfaringer.

- Tæl, hvor mange klik der bliver brugt (kopier siderne, der bliver brugt).
- Drøft, hvilke overvejelser der blev gjort undervejs
- Sammenlign med et andet par/en anden gruppe.

Søgeopgaver på den engelske Wikipedia:

Task	Start	End
1	Radar https://en.wikipedia.org/wiki/Radar	Thermometer https://en.wikipedia.org/wiki/Thermometer
2	Microscope https://en.wikipedia.org/wiki/Microscope	X-ray https://en.wikipedia.org/wiki/X-ray
3	Paper https://en.wikipedia.org/wiki/Paper	Couch https://en.wikipedia.org/wiki/Couch
4	Internet https://en.wikipedia.org/wiki/Internet	Podcast https://en.wikipedia.org/wiki/Podcast
5	Electric Light https://en.wikipedia.org/wiki/Electric_light	Pottery https://en.wikipedia.org/wiki/Pottery

Inventions – Level 3 Task

BILAG 5

Læringsmål

1. at søge information om valgt opfindelse
2. at øge og arbejde med ordforråd
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Niveau	Mestringsmål	Kommunikative mål
3 Skabe Vurdere	<ol style="list-style-type: none"> 1. Jeg kan søge information om min valgte opfindelse og reflektere over opfindelsens brugbarhed og relevans i verden. 2. Jeg kan udvælge og arbejde med ti ord, som jeg ikke kendte i forvejen, og anvende dem i min factbook. 3. Jeg kan med mine egne ord beskrive, vurdere og reflektere over min valgte opfindelse. 	<ol style="list-style-type: none"> 3a. Jeg producerer en factbook med fotos og tekst, hvor jeg beskriver, vurderer og reflekterer over min valgte opfindelses funktion og baggrund. 3b. Jeg præsenterer min factbook på engelsk for andre.

What to do

1. Choose an invention and tell you teacher which one you chose.
2. While researching, collect and work with 10 new words. Fill out all 3 colours of the Word List Task.
3. Research your invention on the internet and answer the following **work questions**:
 - a. Describe the invention – what does it do?
 - b. Describe the historical time when it was invented and explain what it replaced.
 - c. Explain how it was invented.
 - d. Describe what is it made of.
 - e. Explain how you use it.
 - f. Who made it? Give details about background, education, and road to success.
 - g. Why was it invented?
 - h. How did the invention improve the world at the time?
4. Write a Factbook
 - a. Create a front page with a title, photos, and author (you).
 - b. Use the “work questions” as headlines and write 8 chapters.
 - c. Illustrate your Factbook with photos and pictures.
 - d. Use 7-10 of the words from the Word List Task and underline the words in your factbook.
 - e. Be aware of the layout.
 - f. Use the Check List before handing in.

Hand in

1. Factbook
2. Word List Task

Inventions – Level 2 Task

BILAG 6

Læringsmål

1. at søge information om valgt opfindelse
2. at øge og arbejde med ordforråd
3. at udarbejde en factbook på engelsk og præsentere den for andre

Niveau	Mestringsmål	Kommunikative mål
2 Analysere Anvende	<ol style="list-style-type: none"> 1. Jeg kan søge og anvende information om min valgte opfindelse og besvare de tilhørende arbejdsspørgsmål. 2. Jeg kan finde og arbejde med ti ord, som jeg ikke kendte i forvejen, og anvende dem i min factbook. 3. Jeg kan med mine egne ord beskrive og forklare om min valgte opfindelse. 	<ol style="list-style-type: none"> 3a. Jeg udvælger og organiserer en factbook med fotos og tekst, hvor jeg beskriver og illustrerer min valgte opfindelses funktion og baggrund. 3b. Jeg præsenterer eller læser højt af min factbook på engelsk for andre.

What to do

1. Choose an invention and tell you teacher which one you chose.
2. While researching, collect and work with 10 new words.
Fill out the blue and green part of the Word List Task.
3. Research your invention on the internet and answer the following **work questions**:
 - a. Describe the invention – what does it do?
 - b. Describe the historical time when it was invented.
 - c. Describe what is it made of.
 - d. Explain how you use it.
 - e. Who made it? Give details about background and education.
4. Write a Factbook
 - a. Create a front page with a title, photos, and author (you).
 - b. Use the “work questions” as headlines and write 5 chapters.
 - c. Illustrate your Factbook with photos and pictures.
 - d. Use 5-7 of the words from the Word List Task and underline the words in your factbook.
 - e. Be aware of the layout.
 - f. Use the Check List before handing in.

Hand in

1. Factbook
2. Word List Task

Inventions – Level 1 Task

BILAG 7

Læringsmål

1. at søge information om valgt opfindelse
2. at øge og arbejde med ordforråd
3. at udarbejde en factbook på engelsk og præsentere den for andre

Niveau	Mestringsmål	Kommunikative mål
1 Forstå Huske	<ol style="list-style-type: none"> 1. Jeg kan søge information om min valgte opfindelse og besvare de tilhørende arbejdsopgaver. 2. Jeg kan finde og arbejde med ti ord, som jeg ikke kendte i forvejen, og bruge dem i min factbook. 3. Jeg kan med mine egne ord beskrive min valgte opfindelse. 	<ol style="list-style-type: none"> 3a. Jeg fremstiller en factbook med fotos og ord/sætninger, der beskriver min valgte opfindelses funktion. 3b. Jeg præsenterer eller læser højt af min factbook på engelsk for andre.

What to do

1. Choose an invention and tell you teacher which one you chose.
2. While researching, collect and work with 10 new words. Fill out the blue part of Word List Task.
3. Research your invention on the internet and answer the following **work questions**:
 - a. Describe the invention – what does it do?
 - b. Explain how you use it.
 - c. Who made it? What is the inventor's background and education?
4. Write a Factbook
 - a. Create a front page with a title, photos, and author (you).
 - b. Use the "work questions" as headlines and write 3 chapters.
 - c. Illustrate your Factbook with photos and pictures.
 - d. Use 3-5 of the words from the Word List Task and underline the words in your factbook.
 - e. Be aware of the layout.
 - f. Use the Check List before handing in.

Hand in

1. Factbook
2. Word List Task

Word List Task – continued

BILAG 8.2

Write the word in a sentence (level 2 + 3):

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

Notes for Research – Level 3

BILAG 9.1

Work question	My notes
a. Describe the invention – what does it do?	
b. Describe the historical time when it was invented and explain what it replaced.	
c. Explain how it was invented.	
d. Describe what is it made of.	
e. Explain how you use it.	
f. Who made it? Give details about background, education, and road to success.	
g. Why was it invented?	
h. How did the invention improve the world at the time?	

Notes for Research – Level 2

BILAG 9.2

Work question	My notes
a. Describe the invention – what does it do?	
b. Describe the historical time when it was invented.	
c. Describe what is it made of.	
d. Explain how you use it.	
e. Who made it? Give details about background and education.	

Notes for Research – Level 1

BILAG 9.3

Work question	My notes
a. Describe the invention – what does it do?	
b. Explain how you use it.	
c. Who made it? What is the inventor's background and education?	

Would you rather ... Quiz & Swap



BILAG 10

Would you rather have a video game controller stuck on your hand or a cell phone stuck on your hand?	Would you rather discover a new plant or a new animal?	Would you rather invent bubblegum that never loses its flavour or a lollipop that never finishes?
Would you rather be a world-famous doctor or a world-famous scientist?	Would you rather live without a television or without the Internet?	Would you rather invent a machine that does all your chores or a machine that does all your homework?
Would you rather be invisible or be able to fly?	Would you rather have an endless supply of books or an endless supply of movies?	Would you rather invent video games you can enter into and play or invent board games where all the pieces can move by themselves?
Would you rather have to wear the same clothes for a year or the same shoes for a year?	Would you rather have two right hands or two left feet?	Would you rather be the smartest kid in class or the best player on a sports team?
Would you rather build a car or build a house?	Would you rather be the size of an ant or the size of a GIANT?	Would you rather live on a castle or a farm?
Would you rather live in a solar powered house or in a wind powered house?	Would you rather invent hats that style your hair or shirts that make you run faster?	Would you rather be known for always being honest or always being kind?
Would you rather live 100 years in the future or 100 years in the past?	Would you rather invent plates that make any food you think of or cups that never get empty?	Would you rather live alone on the moon or have 100 roommates?
Would you rather be super funny or super smart?	Would you rather invent shoes that let you walk on air or gloves that let you catch sun rays?	Would you rather be famous for inventing something bad or not be known and invent something good?

Mime a Profession



BILAG 11

A doctor	A cleaner	A policeman
A teacher	A baker	A pilot
A singer	A butcher	An astronaut
A bus driver	A waiter	A mechanic
A soldier	An electrician	A priest
A carpenter	A photographer	A football player
A fireman	A basket player	A painter
A woodsman	A chef	A queen

Factbook Check List

BILAG 12

	Not yet	Yes!
Did I create a front page?		
Did I answer all the work questions?		
Did I write the right number of chapters?		
Did I use the correct number of words from the Word List Task and remember to <u>underline</u> them?		
Did I illustrate my factbook?		
Did I choose a layout where text and illustrations match?		
Did I rehearse reading my factbook aloud?		
Am I ready to present my factbook to others?		

Layout examples:

Headline

XXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXX

Photo

Headline

XX
 xxxx. XX
 xxxxxxxxx. XXXXXXXXXXXX
 xxxxxxxxxxxxxxxxxxxxxxxxx
 XXXXXXXXXXXXXXXXXXXXXXXX
 xxxxxxxxxxxxxxxxxxxxxxxxx.
 XXXXXXXXXXXXXXXXXXXXXXXX
 xxxxxxxxxxxxxxxxxxxxxxxxx
 xxxx. XXXXXXXXXXXXXXXX
 xxxxxxxxxxxxxxxxxxxxxxxxx. XXXXXXXXXXXXXXXXXXXXXXXX
 xxxxxxxxxxxxxxxxxxxxxxxxx. XXXXXXXXXXXXXXXXXXXXXXXX
 xxxxxxxxxxxxxxxxxxxxxxxxx. XXXXXXXXXXXXXXXXXXXXXXXX
 xxxxxxxxxxxxxxxxxxxxxxxxx.

Photo

Headline

XXXXXXXXXXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXXXXXX

Photo

Photo

Extra Task – Inventions

BILAG 13

Your Own Invention

You are a rising star in the world of inventions, and you have a great idea for a new and spectacular invention. You choose what it is and how it is used.

Create a **Sketchbook** to show and tell about your invention with notes/descriptions/explanations/illustrations/drawings/and ...

The Sketchbook can contain descriptions of the invention where you:

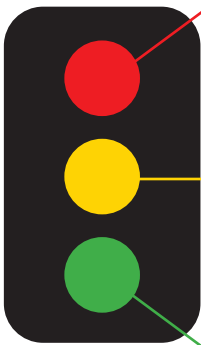
- a. Name your invention and explain what it is.
- b. Give explanations of how you use it.
- c. Describe what it looks like and what it is made of.
- d. Explain why we need the invention in our lives.
- e. Add any other thing you find relevant.

Evaluation Inventions

BILAG 14.1

Read the three "mestringsmål" again and assess them with a red, yellow or green colour in the traffic lights. In the fourth traffic light, you assess the presentation of your factbook. In the middle, you have to write a little explanation. You may use the sentences below.

Student



Possible explanations:

I need more practice.
I had problems getting started.
I had problems understanding the task.

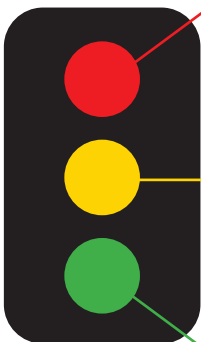
Possible explanations:

I'm well on my way, but not quite there yet.
The task was a challenge, but I did my best.
I needed help from my teacher during the process.

Possible explanations:

I reached the goals even though I had troubles along the way.
I reached the goals, but maybe it was too easy?
I reached the goals successfully, and the level was good for me.

Teacher



Possible explanations:

The goal wasn't reached successfully.
There were no new words.
The task was not handed in.

Possible causes:

The process towards the goal has been good, but not quite there.
The results have not reached all the demands, but the process has been good.
The task is limited, but the process and goals have been successful.

Possible explanations:

Great use of relevant vocabulary and the goal has been reached.
The goal has been executed at a high and well-researched level.
The goal is reached and a very high and challenging level.

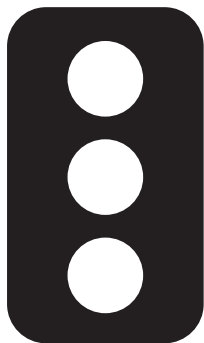
Evaluation Inventions

Name: _____

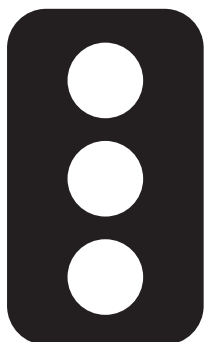
Student

Write an explanation (filled out by student and teacher)

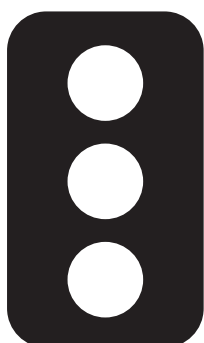
Teacher



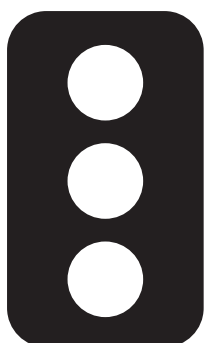
Mestringsmål nr. 1



Mestringsmål nr. 2



Mestringsmål nr. 3



Factbook presentation

