



PRESENTATION AT SCHOOL

OVERVIEW

WE KNOW SORT DOMESTIC WASTE, BUT IT IS NOT ENOUGH. WE NEED TO KNOW METHODS HOW CAN WE PREVENT PRODUCTION OF MORE WASTE AND HOW WE CAN RECYCLE SORTED PLASTIC MATERIAL AS A PRECIOUS MATERIAL RESOURCE.

THIS MATERIAL WAS CREATED FOR THOSE WHO ARE INTERESTED IN ACTIVALLY TACKLING THE USE OF PLASTIC WASTE AND CONTINUING TO TRANSFER EXPERIENCES ESTABLISHED MOSTLY IN THE WORLDWIDE PRECIOUS PLASTIC COMMUNITY BETWEEN ITS SURROUNDINGS.

THE OBJECTIVE IS TO INTRODUCE PROGRAM FOR CHILDREN AT PRIMARY SCHOOL. THIS PROGRAM WAS DESIGNED AS A SINGLE DAY PRESENTATION WITH DEMONSTRATION OF SIMPLE MACHINES UNDER SUPERVISION OF SKILLED LECTURER FOR CHILDREN BETWEEN 11 – 15 YEARS OLD. THE SECONDARY OBJECTIVE IS TO UNDERSTAND THE ADVANTAGES AND DISADVANTAGES OF PLASTICS AND HOW TO PREVENT CREATION OF ANOTHER PLASTIC WASTE.



3 EXAMPLES HOW TO PROMOTE PLASTIC RECYCLING

AFTER SCHOOL ACTIVITY

- + MANY TOPICS DESCRIBED ON DETAL
- + REGULAR BASIS
- + MORE TIME FOR CREATIVE ACTIVITIES
- + SPACE FOR DEVELOPMENT
- + INDIVIDUAL APPROACH
- SUITABLE ONLY FOR SMALL GROUP
- REQUIRES A FACILITY AND EQUIPMENT

PRESENTATION AT SCHOOL

- + LARGER IMPACT
- + DEMONSTRATION TECHNOLOGY ON SITE
- + CHEAPER THAN REGULAR HOBBY CLUB
- + PRESENTATION AT SCHOOL
- A BRIEF OVERVIEW ABOUT PROBLEM
- NOT ENOUGH TIME TO EXPLAIN EVERYTHING

WORKSHOP FOR PUBLIC

- + INDIVIDUAL APPROACH
- + CREATIVE AND EDUCATION ACTIVITIES
- + PARTICIPANTS MAKE THEIR OWN PRODUCT
- + PROVIDING ADVICES HOW TO JOIN PP
- + SINGLE AFTERNOON ACTIVITY
- SUITABLE FOR SMALL GROUPS
- REQUIRES A FACILITY AND EQUIPMENT



PLEASE PAY ATTENTION TO NOTES AND USED SOURCES AS PICTURES OR DATA.

ALL MENTIONED IN NOTES BELLOW SLIDES. EXAMPLE:

13			Polymer name	Polyethylene terephthalate	High-density polyethylene	Polyvinyl chloride	Low-density polyethylene	Polypropylene	Polystyrene	All other plastics, including acrylic ...	
14			Resin identification code								
15			Abbreviation	PET or PETE	HDPE	PVC	LDPE	PP	PS	other	
16			Recyclable	Commonly	Commonly	Sometimes	Sometimes	Occasionally	Commonly	Difficult	
17			Percentage recycled annually	36%	30-35%	<1%	6%	3%	34%	Depends on type	
18			How long to decompose under perfect conditions	450 years ¹	100 - 450 years ²	+450 years ²	20 years ²	200 - 450 years ²	+ 10 000 years ¹	Depends on type	
19			Max. temperature	70°C	120°C	70°C	70°C	135°C	90°C	Depends on type	
			Toxicity level								

Source: <https://alansfactoryoutlet.com/7-types-of-plastics-their-toxicity-and-most-commonly-used-for/>
[1] <https://www.e15.cz/magazin/infografika-jak-dlouho-se-rozklada-odpad-pet-lahvi-to-trva-skoro-pul-tisicileti-1347264#>
[2] <https://maesindopaperpackaging.com/does-plastic-decompose-how-long-does-it-take/>

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POZNÁMKY KOMENTÁŘE



CONTENT

BEFORE YOU START

HOW TO USE THIS MATERIAL

PREPARATION

EVENT

CONTACT



PRECIOUS PLASTIC IS AN OPEN HARDWARE PLASTIC RECYCLING PROJECT AND IS A TYPE OF OPEN SOURCE DIGITAL COMMONS PROJECT. THE PROJECT WAS STARTED IN 2013 BY DAVE HAKKENS AND IS NOW IN ITS FOURTH ITERATION.

IT RELIES ON A SERIES OF MACHINES AND TOOLS WHICH SHREAD, MELT, AND INJECT RECYCLED PLASTIC, ALLOWING FOR THE CREATION OF NEW PRODUCTS OUT OF RECYCLED PLASTIC ON A SMALL SCALE.

BEFORE YOU START



WATCH VIDEO

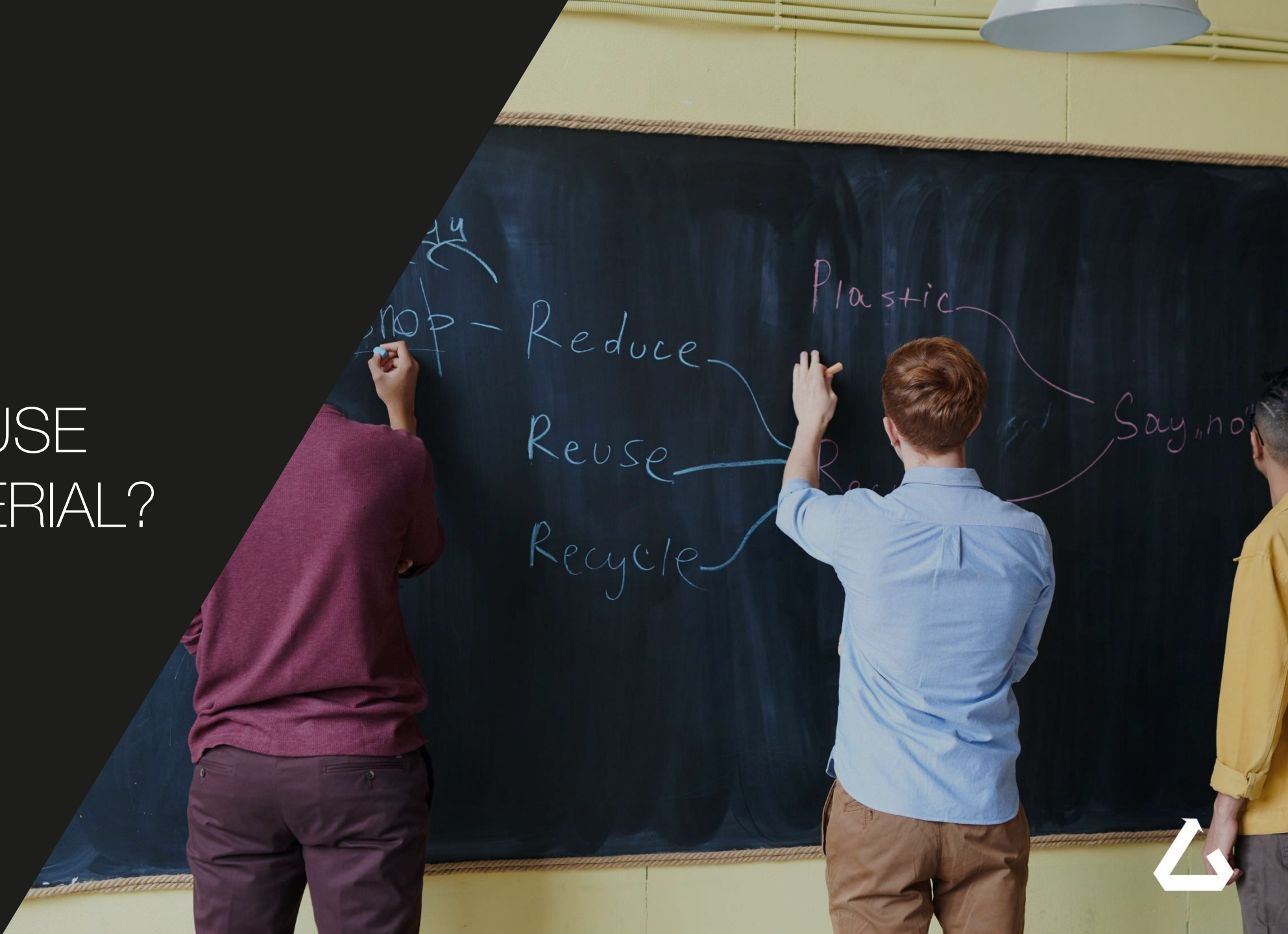


SCAN OR CLICK

BEFORE YOU START



HOW TO USE THIS MATERIAL?



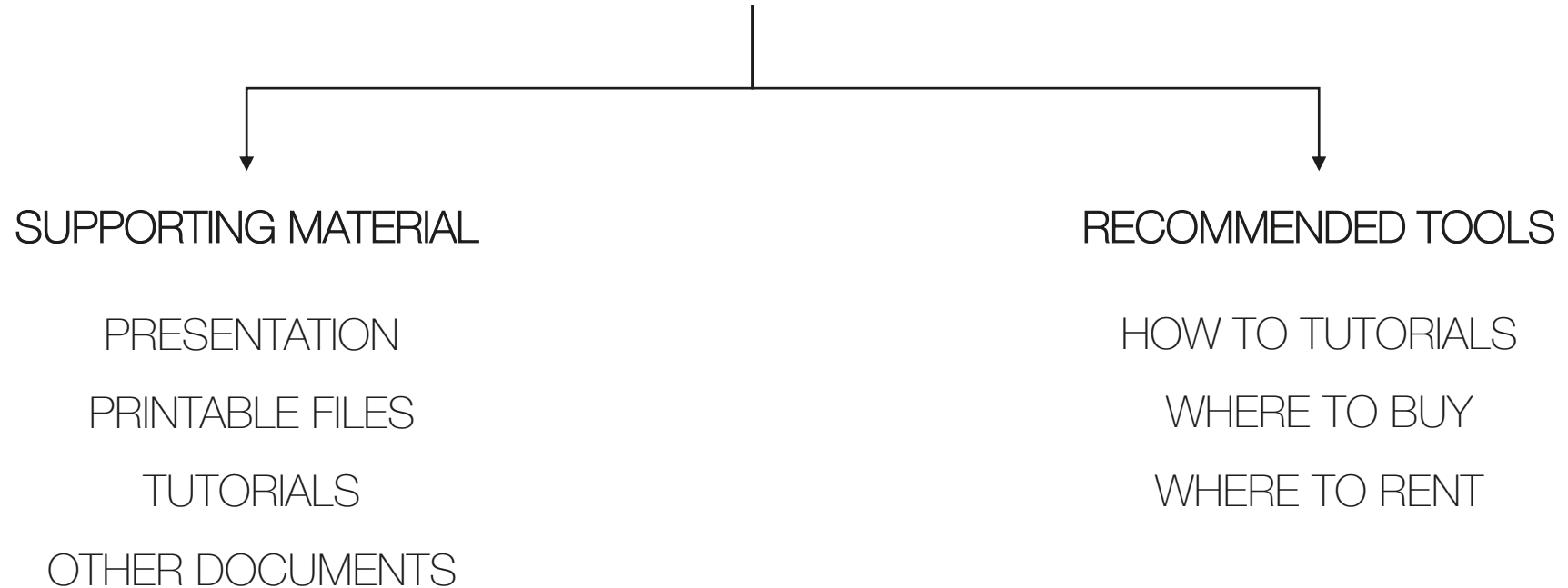
HOW TO USE THIS MATERIAL?

THIS MATERIAL IS ONLY AN OVERVIEW WHICH DESCRIBES WHAT TO PREPARE EVENT AT SCHOOL AND RECOMMENDATIONS HOW TO TEACH ABOUT PLASTIC RECYCLING.

THE OVERVIEW IS PART OF INFORMATION PACKAGE THAT PEOPLE AROUND THE WORLD CAN DOWNLOAD FOR FREE, USE, EDIT, SHARE AND UPGRADE AS THEY WANT.



PRESENTATION AT SCHOOL - OVERVIEW



HOW TO USE THIS MATERIAL



PREPARATION



PREPARATION

BEFORE THE EVENT, IT IS GOOD TO FIND OUT HOW THE SCHOOL APPROACHES EDUCATION IN PLASTICS RECYCLING.

ITS GOOD TO HAVE MACHINES AND ALL EDUCATIONAL MATERIAL IN ONE CLASS DURING WHOLE EVENT AT SCHOOL.

PROJECTOR IN CLASS IS A BIG ADVANTAGE. LECTURER CAN SHOW PRESENTATION AND PLAY VIDEOS.

RECOMMENDATION FOR CHILDREN GROUP SIZE IS MAX. 15 PUPILS.



CHECKLIST BEFORE EVENT AT SCHOOL

- ☐ SET SCALE OF EVENT (NUMBER OF CLASSES, NUMBER OF CHILDREN)
- ☐ SET GOAL OF EVENT WITH SCHOOL DIRECTOR OR TEACHERS
- ☐ IS THERE SUFFICIENT SOCKETS IN THE CLASS TO OPERATE THE EQUIPMENT?
- ☐ IS POSSIBLE TO USE SCHOOL PC AND PROJECTOR FOR PRESENTATION?
- ☐ PROVIDE INFORMATION TO PUPILS SO THEY KNOW WHAT TO EXPECT
- ☐ IF YOU WANT PROCESS MATERIAL COLLECTED BY KIDS AT SCHOOL, EXPLAIN WHAT TO COLLECT



SUPPORTING MATERIAL

PLASTIC SYMBOLS ON PACKAGES – [DOWNLOAD HERE](#)

PLASTIC TYPES OVERVIEW – [DOWNLOAD HERE](#)

EXAMPLE OF PRESENTATION – [DOWNLOAD HERE](#)



SAFETY

SHREDDER MACHINE AND INJECTION MACHINE CAN RUN ONLY UNDER SUPERVISION OF TEACHER.

DURING SHREDDING WEAR SAFETY GLASSES

DURING MANUFACTURING ON INJECTION MAKE SURE SPACE IS VENTILATED WELL.

MANIPULATION WITH HOT MOULDS CAN MAKE ONLY LECTURER IN HEAT RESISTANT GLOVES.

BE AWARE OF TOUCHING MOULDS DURING COOLING PROCESS.



RECOMMENDED MACHINES AND TOOLS



PREPARATION



EVENT AT SCHOOL EXAMPLE



GOALS

INTRODUCTION FACTS ABOUT PLASTIC AS PRECIOUS MATERIAL

DEMONSTRATION OF OPEN SOURCE TECHNOLOGY FOR PLASTIC RECYCLING

INFORMATION WHAT CAN PUPILS DO TO REDUCE CONSUMPTION OF SINGLE USE PACKAGES

KEYWORDS

PLASTIC, RECYCLING, UPCYCLING, DOWNCYCLING, PLASTIC SORTING, SHREDDING, INJECTION
MOULDING, COMPRESSION MOULDING, 3D PRINTING, ZERO WASTE, GREEN WASHING

EVENT AT SCHOOL - EXAMPLE



TIMETABLE

3 MIN	INTRODUCTION OF PROJECT PRECIOUS PLASTIC
2 MIN	PROBLEM – INCREASE OF PLASTIC WASTE
5 MIN	ADVANTAGES AND DISADVANTAGES OF PLASTIC MATERIAL (GOOD AND BAD EXAMPLES)
5 MIN	INTRODUCTION OF DIFFERENT PLASTIC TYPES ON EXAMPLES
3 MIN	STATISTIC ABOUT PLASTIC POLLUTION AND PLASTIC WASTE MANAGEMENT
5 MIN	DEMONSTRATION OF SHREDDING PLASTIC MATERIAL
15 MIN	DEMONSTRATION OF PLASTIC INJECTION MOULDING
2 MIN	DIFFERENCE BETWEEN PLASTIC INJECTION MOULDING AND 3D PRINTING
5 MIN	CONCLUSION, WHAT CAN WE DO TO REDUCE NUMBER OF SINGLE USE PACKAGES



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