## Numeracy in practice teaching and learning examples



### A NEW APARTMENT

#### Can I afford it?

You are moving to another city, and you are looking for a new apartment? But how can you find an apartment that really meets your personal needs and fits into your financial means? Asking friends? Browsing advertisements in newspapers? Searching on the internet? How can you identify the total costs of an apartment to avoid unpleasant surprises later on? If you are you sharing the apartment with someone, what is the fairest way to split the expenses?

As the rental costs are getting higher and higher, maybe you can identify a savings potential in your monthly expenses...

### Overview "A new apartment – Can I afford it?"

#### Context

Everyday life Citizenship Finances

#### Content

Quantity and number Dimensions and shape Using digital skills How to find the right (and affordable) apartment?

# Target group (incl. necessary prior skills and competences)

Adult learners with basic arithmetic skills and basic skills in internet research

**X2** 

#### **Outcomes and results**

The learners are able to determine their actual housing needs and relate them to their financial possibilities in order to make informed decisions.

#### Cognitive processes

Managing situations
Analysing situations
Processing
Reasoning
Mathematising
Problem solving
Critical thinking

#### Dispositions

Self-confidence
Beliefs
Flexibility
Math anxiety
Math difficulties





Main information		
Content	Basic arithmetic operations (addition, multiplication, division) Area measurements Estimations, comparisons Internet research	
Target group	Adult learners with basic arithmetic skills and basic digital skills being interested in the topic of apartment search and rental costs	
Learning intention	What is the intention of adults to face this problem?  — Numeracy for personal and private purposes  — Numeracy to understand society	
Duration	Approx. 4 lessons (or more)	
Material and resources	Websites, apps, worksheets, newspapers	
Group size	Up to 10 learners	
Problem statement	Apartment rent, utilities (water, electricity, gas, waste pickup,), insurances - everything is getting more and more expensive.  What should I do if I am looking for a new apartment?  How can I find a suitable and affordable housing situation?	
Working questions	How can I find an apartment? How big should the apartment be to meet my needs? What other important criteria are there for the right choice of an apartment? How can I find out the total monthly cost of the apartment (including rent, utilities, insurances, internet,)? In shared apartments? What are the costs per tenant? What is my monthly income? What are my monthly expenses? What apartment fits into my financial possibilities?	
Learning outcomes and results	The learners are aware of their financial means, and they can realistically assess which apartment they need and they can afford. They are able to make informed decisions.	
Reference to National Qualification Frame	Optional (country's decision)	





## Working plan

Time (minutes)	Description of content/activities	Material	Methodical and didactic information <sup>1</sup>
45 min +	Activation Discussion guided by the trainer (eventually in small groups):  • What kind of apartment do you need (square meters, number of rooms, location, reachability by public transport,)?  • How much of your monthly income can you spend on housing?  • What possibilities are there to find an apartment?  If the learners have worked in small		HITS Questioning Feedback
	groups – presentation of the results and comparison.  Research		HITS
60 min +	The learners work in pairs or small groups: Having identified their needs, the learners are guided by the teacher to search an apartment according to their needs. Therefore, they search on the internet, they need to select the right filters for the location of the apartment, the square meters, the number of rooms, or the price.	Websites for real estate search (Appendix 1)	Collaborative learning
	Optionally, the research can also be done using newspaper ads.	Rental advertisements from newspapers	Differentiated teaching

<sup>&</sup>lt;sup>1</sup> for description and explanation of kinds of tasks, HITs and other background information please consult the teacher's/user's guide





	Calculating costs The learners identify the additional costs (utilities, heating, security deposit, agency fee,) They identify the total monthly cost	Worksheets, Websites	HITS  Collaborative learning
60 min +	of the apartment and compare with average costs.	(Appendix2)	Hands on learning
+ +	They calculate the cost or the apartment per person (equal split or proportional split according to the size of their rooms).	(Appendix 3)	Questioning
	The learners discuss different their approaches.		Feedback
45 minutes (or more)	Develop According to their monthly income, the learners check, how much they really can spend on an apartment.  Alternatively, the learners can track their expenses for a month to get a more accurate view of their monthly expenses.  Discussing within the group, they can try to identify the potential for saving money.	Online budget calculator (Appendix 3) Worksheets Budget planner	HITS Hands on learning  Questioning
30 min +	Transfer The learners present their decision and discuss it considering the individual assumptions behind. Feedback from the group.  The learners get clarity of their needs and their own financial means. They are able to make informed decisions when it comes to searching a new apartment.		HITS Feedback





### Suggestions for the teacher/user

The example presented here should be considered as exemplary and inspirational material presenting a guideline with a high range of possibilities of adapting those suggestions to a specific group of learners or an individual learner with his or her very personal requirements.

In concrete terms, the example "A new apartment – Can I afford it" could be adapted these ways:

- Duration: The duration of this example can vary significantly depending on the learners' interest. Plan enough time for the activation, the learners should have the opportunity to become aware of their needs and exchange their ideas afterwards.
- Individualization: For learners who are not familiar with internet research, the teachers can also use apartment advertisements from newspapers.
- Further or additional material: This example can be extended in different ways:
  - o Analysing statistics about prices per square meter in different areas
  - o Finding and comparing insurances for an apartment
  - o Understanding rental contracts
  - Using budget planners or budget books to track all the expenses and incomes for a period.
- Learning setting: Talking about money and their own financial situation might be a sensitive topic for some learners. It is important that the learners are not put in an embarrassing situation. This example is predestined for work in pairs or in small groups.
   In the activation phase, learners with similar needs can be identified. They can work together for the further exercises.

Our educational activities aim at numeracy skills being not only memorized, but first of all being practiced and functionally used by the learners in daily life or/and vocational situations. It is therefore recommended to implement the idea of HITS<sup>2</sup> (higher impacts of teaching skills) as far and often as possible: ...

- ... work with concrete and authentic material that learners will recognize from everyday life situations.
- ... ask the learners questions and let them raise questions themselves. It can be crucial to discuss numeracy themes, contexts and numbers.

<sup>&</sup>lt;sup>2</sup> for description and explanation of kinds of tasks, HITs and other background information please consult the teacher's/user's guide





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- ... think of possible ways of transfer: The learners should be enabled to make informed decisions. They are sensitive to their financial situation and willing to reflect it. Once they are looking for an apartment, the learners will be able to estimate the cost correctly. The learners know where they can get information about renting, renting costs, insurances and contracts.
- ... encourage the learners to collaborative learning.

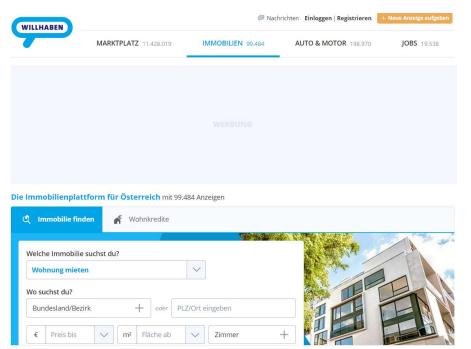




## Appendix 1

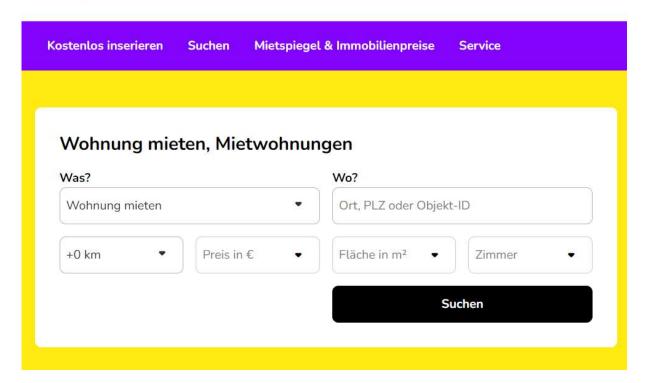
#### **Examples for websites for real estate research**

www.willhaben.at/iad/immobilien, [16.10.2023]



www.wohnungsboerse.net, [16.10.2023]

## Wohnungsboerse









## Appendix 2

#### Beispiel: Fixkosten beim Einpersonen-Haushalt

Fixkosten	monatliche Kosten*
Miete (50m² Wohnung)	620 Euro
Strom (Jahresverbrauch 2.000 kWh)	36 Euro
Gas (Jahresverbrauch 7.000 kWh )	34 Euro
Haushaltsversicherung (Guter Schutz, 10 Jahre Vertragslaufzeit)	5 Euro
Unfallversicherung	12 Euro
Internet (30 Mbit Download)	19,90 Euro
Handy (20 GB Datenvolumen)	11,50 Euro
Summe monatliche Fixkosten	738,40 Euro

\*Bei den monatlichen Kosten handelt es sich um Richtwerte; je nach persönlicher Situation, Alter, Wohnort, etc. kann die Höhe der persönlichen Fixkosten von den in der Tabelle angegebenen Werte abweichen.

<u>Haushaltsrechner für Ihr Haushaltsbudget | durchblicker.at</u>, [19.10.2023]

## Calculate and answer the following questions:

	Calculation	Result
What is the cost of energy per month?	36 € + 34 €	70 €
What is the cost of energy per year?		
What is the cost of insurance per month?		
What is the cost of insurance per year?		
What are the total costs per year?		



## Appendix 3

### My apartment

	3 meters	1m	4 meters	
4 meters	Bathroom	Hallway	Kitchen	4 meters
5 meters	Bedroom 1		Bedroom 2	5 meters
	3,5 meters		4,5 meters	



How many square meters do the bedrooms have? Calculate.

	Bedroom 1	Bedroom 2
length (m)		
width (m)		
area (m²)		

The apartment has 72 m². The total cost of the apartment is 720 €. What is the price per m²?

How would you split the cost fairly if you share the apartment with another person? Discuss.

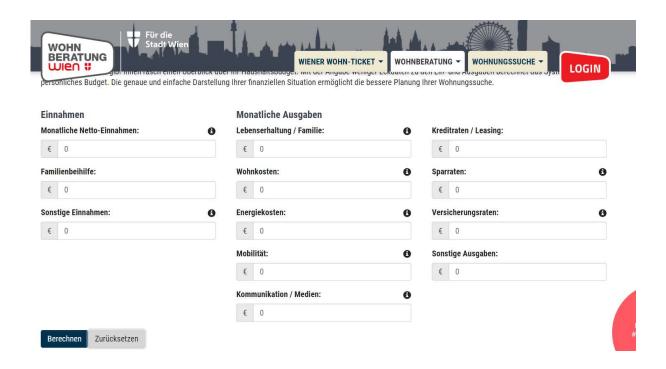


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## Appendix 4

#### **Example for online budget calculator**

www.wohnberatung-wien.at/wohnberatung/haushaltsrechner; [16.10.2023]









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