Teaching Plan

Title	Externality rights (Advanced Level)
Instructional Objectives	➢ Use a case to show the existence of property right and how to apply Coase Theorem in real world.
Keywords and Concepts Illustrated	➢ Property rights ➢ Externalities ➢ Coase Theorem
Needed Time	➢ 35 mins

Sessions	Details	Time Spent
Activity/ Announcement	1. T: Do you like barbecue? If yes, that means having barbecue can give you positive utilities. However, if you don't like barbecue and someone has it near you, your utilities will be reduced.	5 mins
	2. T: Now pair up yourselves. One of you is a BarBQer who likes and wants to have barbecue; the other one is a neighbor to the BarBQer and thinks barbecue produces too much smoke.	
	3. T: (Post or project Table 1.) Here are the payoffs of BarBQers and neighbors. Their payoffs depend on the level of smoke produced from barbecue. In this table, the payoffs are in terms of money. With higher smoke level, BarBQers' payoffs are higher, but Neighbors' are lower, vice versa. The total payoffs of two people are also shown.	
	4. T: Those pairs in my left hand side live in a country where the neighbors have the right to be compensated for any smoke level over zero. That means if BarBQers want to have barbecue, you have to pay to your neighbors as compensation. Those in my right hand side live in a place where the BarBQers have to be compensated to accept any level below three. That means if neighbors don't want BarBQers to have barbecue, neighbors have to pay to BarBQers as compensation.	
	5. T: Now you have three minutes to decide what smoke level your own pair will have. Every pair should try to come to a satisfactory bargain. I am now distributing a Compensation Agreement (Printed on Figure 1) to each pair. (Distribute type 1 to those pair in which neighbors have the right to get compensation; distribute type 2 to pair in which BarBQers have the right.)	5 mins
	6. If students have no idea where to start, teacher can hint them by telling them which smoke level they should start from in their bargaining. For the pair neighbor has right, they should start from zero smoke level. For the pair BarBQer has right, they should start from the smoke level of three.	
	7. Discussion: 7.1. How many of you agree on smoke level zero? Smoke level one? Smoke level two? Smoke level three? Select one or two pairs in each level and ask: Why did you	25 mins

	choose to reach the level and what did you consider when you had the bargaining? What was your compensation? 7.2. What is the assumption behind when we claimed that BarBQer (neighbor) has the right to be compensated? (Teacher can introduce property rights here.) 7.3. What is the best choice of the smoke level to both of BarBQer and neighbor when BarBQer has the right to be compensated? (It should be the level of 2 which gives the highest total payoffs of BarBQer and neighbor.) 7.4. What is the best choice of smoke level to both of BarBQer and neighbor when neighbor has the right to be compensated? (The answer is also the level of 2. So no matter who has the right, the same optimal choice can also be achieved. Introduce Coase Theorem here.)	
Tools	➤ Projector – if teacher uses projector instead of posting Table 1 on board ➤ Photocopy enough Figure 1 for the class.	
Definitions	➤ Property rights – property rights are socially enforced rights to select the use of an economic good. It can be seen as rules or criteria of competition which must exist to solve conflict. (Leung, 1989) ➤ Externalities – refer to the spillovers which are the consequences of the action that actors don't take into account and therefore don't influence their decision. (Leung, 1989) ➤ Coase Theorem – It states that if property rights are well-defined or specified and transaction costs are zero, then a) the allocation of resources will be efficient as there is no problem of externalities, b) the allocation of resources will be identical, regardless of the initial assignment of property rights. (Lam, 1989)	
References	➤ Stodder, Jim, Spring 1996, An Experiment on Externality Rights, Classroom Expernomics, vol.5(1), pp. 5-7 ➤ Definition: 　➤ Leung, M. P., 1989, *Hong Kong Advanced Level Examination Microeconomics*: Hung Fung Book Co.Ltd. 　➤ Lam, P. L., 1996, *Advanced Level Microeconomics*: Illustrations Macmillan Publishers (HK) Ltd	

Appendix　　　　　**Materials for Teacher**

Table 1　　　　　Payoffs of BarBQer and neighbor
Figure 1　　　　　Compensation Agreement